

TRAFFIC STUDY

For

**MONTEMAR (TM-5316)
RESIDENTIAL DEVELOPMENT**

in the County of San Diego

Submitted To:

Distinctive Homes

Submitted By:

Darnell & Associates, Inc.

Revised May 11, 2005

Revised April 5, 2005

(Original December 28, 2004)

Darnell & ASSOCIATES, INC.
TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

May 11, 2005

Mr. Duane Betty
Distinctive Homes
707 Broadway, Suite 1150
San Diego, CA 92101

D&A Ref. No: 040906

Subject: Revised Traffic Study for the Montemar (TM-5316) Residential Development

Dear Mr. Betty:

In accordance with your authorization, Darnell & Associates, Inc. (D&A) has revised our transportation study to assess impacts related to the proposed 13 estate dwelling unit development on Montemar Drive in the County of San Diego.

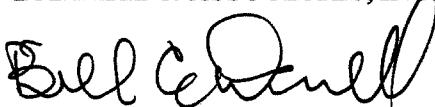
This report analyzes the traffic impacts associated with the proposed project on local roadways and intersections, including existing, existing plus project, existing plus approved/pending projects and cumulative traffic conditions.

This report is revised in accordance with County of San Diego significance criteria, and includes response to County comments dated February 14, 2005 and May 5, 2005.

If you have any questions, please feel free to contact this office.

Sincerely,

DARNELL & ASSOCIATES, INC.



Bill E. Darnell, P.E.

BED/bh/jam
040906-Montemar rpt3-5-11-05/



5/11/05

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FOR
MONTEMAR (TM-5316)
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Submitted To:

*Distinctive Homes
707 Broadway, Suite 1150
San Diego, CA 92101*

Submitted By:

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*May 11, 2005
040906/040906-Montemar rpt3-5-11-05*

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SECTION I INTRODUCTION & METHODOLOGIES

EXECUTIVE SUMMARY

The proposed Montemar Drive residential development (TM-5316) consists of 13 estate dwelling units located on Montemar Drive approximately 230 feet southwest of Austin Drive in the County of San Diego. The project will generate approximately 156 daily trips with 12 morning peak hour and 16 evening peak hour trips.

For the existing plus project condition, the project does not demonstrate significant direct impacts on study area intersections.

For the existing plus project condition, the project does not demonstrate significant traffic impacts on roadway segments:

Cumulative impacts are identified at the following intersections:

Jamacha Boulevard/Sweetwater Springs: This intersection fails with the addition of cumulative projects, including the proposed project and requires additional lanes for adequate level of service. The Montemar project is considered part of the cumulatively significant impact according to County standards and is required to provide mitigation. This intersection requires an exclusive northbound left turn lane, and exclusive southbound left turn lane, exclusive southbound through lane, and a dual southbound right turn lane. The Montemar project will be required to participate in fair share contributions to improvement of this intersection, or pay into an established County fee program.

Sweetwater Springs/State Route 94-Westbound: This intersection fails with the addition of cumulative projects, including the proposed project and requires additional lanes for adequate level of service. The Montemar project is considered part of the cumulatively significant impact according to County standards and is required to provide mitigation. This intersection requires an exclusive westbound left turn lane. The Montemar project will be required to participate in fair share contributions to improvement of this intersection, or pay into an established County fee program.

Cumulative impacts are identified on the following roadway segments:

Jamacha Boulevard from Pointe Parkway to Sweetwater Springs: This section fails in the cumulative condition as a four-lane facility. The Montemar project is considered part of the cumulatively significant impact according to County standards and is required to provide mitigation. This section requires six lane prime arterial standards. The Montemar project will be required to participate in fair share contributions to improvement of this roadway segment, or pay into an established County fee program.

Sweetwater Springs from Del Rio to Austin: This section fails in the cumulative condition as a four-lane facility, based on a daily traffic analysis. However, using a peak hour traffic analysis, this segment operates acceptably and does not require mitigation (assuming improvements at intersections are installed as summarized above).

PURPOSE AND BACKGROUND

The purpose of this report is to document the results of the traffic analysis conducted for the proposed 13 dwelling unit Montemar Drive (TM-5316) residential development. The project is located on Montemar Drive, approximately 230 feet southwest of Austin Drive in the County of San Diego. Figure 1 illustrates the location of the project site. Figure 2 shows the site plan for the proposed residential development.

In addition to the existing condition, Near Term Cumulative Conditions are analyzed to identify potential traffic impacts associated with the development of the proposed project and to determine appropriate mitigation measures.

The traffic analysis was performed in accordance with the County of San Diego traffic study requirements and in compliance with the regional Congestion Management Program (CMP) standards. The CMP process is triggered for large scale projects which are expected to generate 2,400 or more average daily trips, or 200 or more peak hour trips.

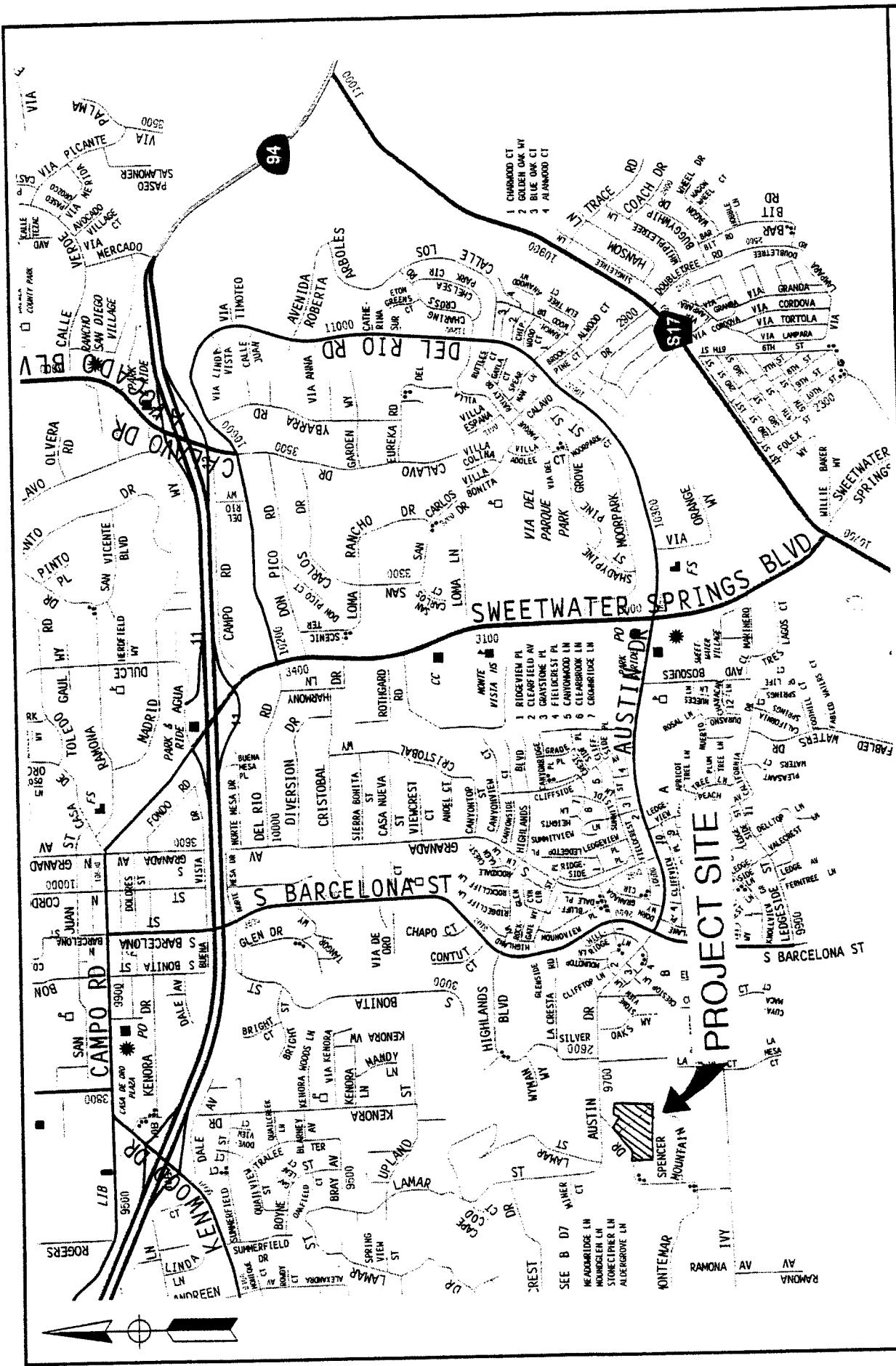
This project does not meet daily or peak hourly thresholds for a CMP analysis.

LEVEL OF SERVICE

Level of Service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. Level of Service is defined on a scale of A to F; where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating speeds. Table 1 shows the ADT and delay ranges that are equivalent to each level of service.

According to page XII-4-18 of the San Diego County General Plan *Public Facility Element*, the objective in the Transportation Section is to provide a "Level of Service C or better on County Circulation Element roads." The PFE however establishes LOS D as an off-site mitigation threshold for discretionary projects. When an existing Level of Service is already LOS D, "a LOS D may be allowed." According to the PFE, projects which significantly increase congestion on roads operating at LOS E or LOS F must provide mitigation. According to the PFE, this mitigation can consist of a fair share contribution to a program to mitigate the project's impacts.

FIGURE 1
VICINITY MAP



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COUNTY OF SAN DIEGO TRACT 5316 RPL 1

LEGEND:

- (1) AREA SUBJECT TO INUNDATION BY INC 100-YEAR STORM (CREATE RIVER 25)
- (2) EXISTING PAVEMENT
- (3) EXISTING IN GROVE
- (4) EXISTING DRIVEWAY
- (5) EXISTING SEWER MAIN
- (6) EXISTING SEWER MANHOLE
- (7) PROPOSED AC PAVEMENT
- (8) PROPOSED IN GROVE STORM DRAIN PIPE
- (9) PROPOSED IN PRIVATE SEWER MAIN/HIGH
- (10) PROPOSED IN GROVE & GROVE
- (11) PROPOSED PAV.
- (12) PROPOSED PAV. & GROVE
- (13) PROPOSED SEWER
- (14) PROPOSED SEWER MAIN - OF SEW. DELEGATION
- (15) PROPOSED SEWER VALVE VALVE
- (16) PROPOSED TO PUBLIC STORM DRAIN EASEMENT
- (17) PROPOSED TO CATCH BASIN
- (18) PROPOSED TO INC PRIVATE SEWER MAIN (GROVE)
- (19) PROPOSED TO INC PRIVATE SEWER MAIN (GROVE)
- (20) PROPOSED PRIVATE SEWER MAIN (GROVE)
- (21) PROPOSED PRIVATE SEWER MAIN (GROVE)
- (22) PROPOSED PRIVATE SEWER MAIN (GROVE)
- (23) PROPOSED PRIVATE SEWER MAIN (GROVE)
- (24) PROPOSED PUBLIC SEWER EASEMENT
- (25) PROPOSED USE A DRAIN
- (26) PROPOSED USE A DRAIN
- (27) PROPOSED PUBLIC SEWER EASEMENT

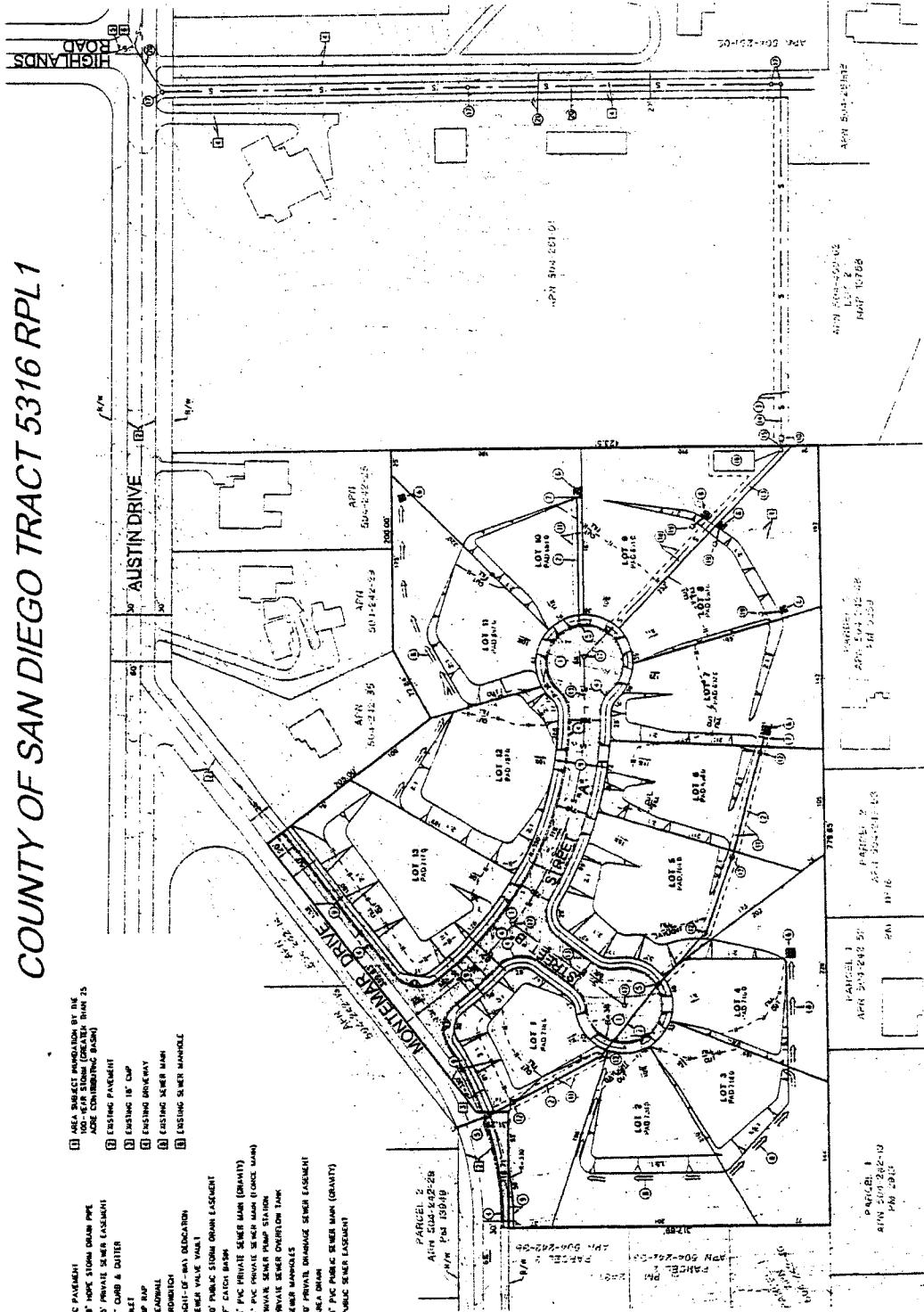


FIGURE 2
SITE PLAN

TABLE 1
LEVEL OF SERVICE RANGES

Level of Service	Roadway Segments - Average Daily Traffic (ADT) Volume ¹	Signalized Intersections - Delay (Seconds/Vehicle) ²	Unsignalized Intersections - Delay (Seconds/Vehicle) ²
A	Less Than 1,900	Less Than or Equal to 10.0	Less Than or Equal to 10.0
B	1,900 to 4,100	10.1 to 20.0	10.1 to 15.0
C	4,100 to 7,100	20.1 to 35.0	15.1 to 25.0
D	7,100 to 10,900	35.1 to 55.0	25.1 to 35.0
E	10,900 to 16,200	55.1 to 80.0	35.1 to 50.0
F	Greater Than 16,200	Greater than 80.0	Greater than 50.0

¹ The volume ranges are based on the County of San Diego Circulation Element of a Light Collector, the average daily volume ranges for the other roadway classifications has been provided in Appendix A.

² The delay ranges shown are based on the 2000 Highway Capacity Manual (HCM).

ANALYSIS METHODOLOGY

The roadway segment daily LOS was determined by comparing the average daily traffic (ADT) volumes under all traffic conditions to the capacity of the roadway according to its roadway cross-section and classification. For the purpose of this report, the daily traffic volumes of the roadway segments in the vicinity of the project were compared to the County of San Diego Level of Service classification thresholds.

The analysis of signalized/unsignalized intersections utilized the operational analysis procedure provided by the Highway Capacity Manual program, which is an approved County of San Diego methodology. This method defines Level of Service in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (vphpl) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e. percentage trucks) and shared lane movements (i.e. through and right-turn movements originating from the same lane).

ORGANIZATION OF REPORT

Following this introduction, Section II introduces the existing base condition. Section III discusses trip generation and trip distribution associated with the proposed project. Section IV introduces the traffic associated with the Near Term Cumulative condition. Section V provides the impact analysis of all conditions. Section VI discusses the access requirements. Section VII summarizes any direct and cumulative impacts.

SECTION II

EXISTING CONDITIONS

This section of the traffic study is intended to assess the existing conditions of the roadways and intersections within the vicinity of the project to determine travel flow and/or delay difficulties, if any, that exist prior to adding the traffic generated by the proposed project. The existing conditions analysis establishes a base condition which is used to apply the other scenarios discussed in this report.

Darnell & Associates conducted a field review of the area surrounding the project. Figure 3 depicts existing roadway and intersection geometrics in the project vicinity.

ROADWAY CHARACTERISTICS

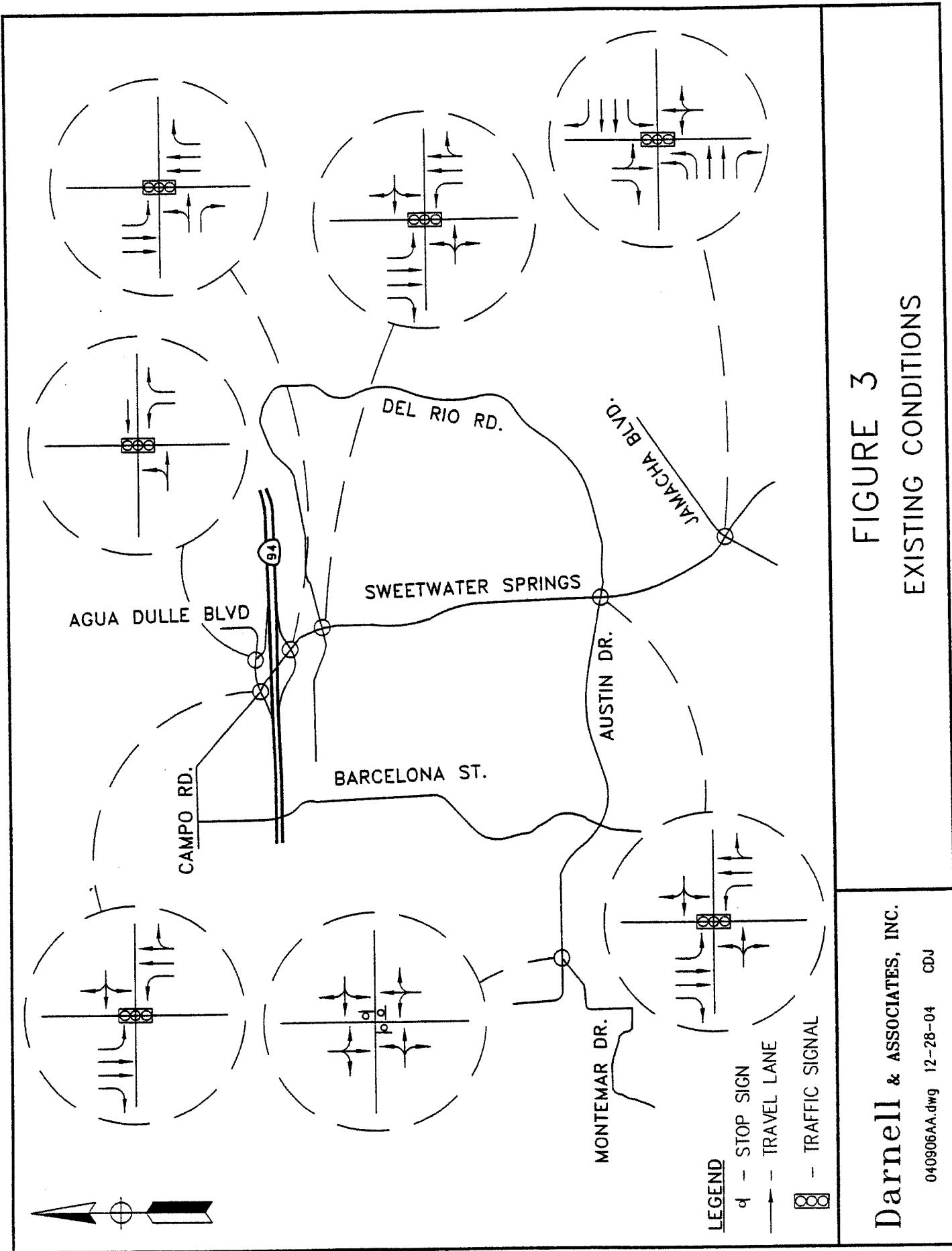
Existing Roadway Segments

South Bay Parkway (SR-54) is typically a four-lane divided freeway and lies within the ultimate SR-54 corridor. Caltrans improvements on South Bay Parkway are in progress from I-805 including grade separated interchanges. Alternatives for the ultimate completion of the SR-54 are being assessed by SANDAG, Caltrans, and the County of San Diego. A project study report will not be completed on the alternatives, including preferred alignments until late in 2005.

Jamacha Boulevard (SF-1397) is constructed to four-lane major road standards, capacity of 37,000 ADT at LOS E, from Sweetwater Road to La Presa. Between La Presa and Omega, Jamacha has three travel lanes, two westbound and one eastbound. This facility is posted at 45 miles per hour outside the business area and 40 miles per hour within the business area. Jamacha Boulevard is part of SANDAG's Regionally Significant Arterial System. SANDAG is not recommending projects beyond those contained in the Cities and County Circulation Element plans.

The section of Jamacha between Omega and Pointe Parkway is constructed as a two lane undivided highway, capacity of 16,200 ADT at LOS E. From Pointe Parkway to State Route 94, Jamacha is constructed as a four lane roadway with a double yellow divider and a posted speed of 50 miles per hour. These sections have a cross section equivalent of a major road with the capacity of 34,300 ADT at LOS D.

Sweetwater Springs Boulevard (SA-970) is constructed from SR-94 westbound ramps to approximately 300 feet north of Jamacha Boulevard as a four lane roadway which is divided with either a continuous center left turn lane or 12-14 foot painted median. This segment of Sweetwater Springs has a cross section equivalent of a major road with the capacity of 34,300 ADT at LOS D, and is posted at 45 miles per hour.



Campo Road/State Route 94 (SR-94) is a four-lane freeway east of Avocado Drive with a posted speed limit of 65 miles per hour, capacity of 80,000 ADT at LOS E. West of Avocado, Campo Road (SR-94) is a four lane major roadway with a painted median and posted speed limit of 55 miles per hour, capacity of 34,300 ADT at LOS D.

Austin Drive (SC-2130) is a two-lane undivided light collector. East of Barcelona Street, Austin Drive has a continuous center left turn lane, bike lanes, permitted parking, and a posted speed limit of 40 miles per hour. West of Barcelona, the speed limit is reduced to 30 miles per hour and the roadway width narrows to 29 feet. There are no bike lanes or center left turn lane and parking is prohibited. The Circulation Element Classification of Austin Drive is a Light Collector with bike lanes, capacity of 10,900 ADT at LOS D.

Barcelona Street (SC-2110) is a two lane roadway with a posted speed limit of 25 miles per hour. North of Austin, Barcelona has 36 feet of pavement and is classified as a light collector on the Circulation Element. There is a center left turn lane, bike lanes, and permitted parking. South of Austin Drive, Barcelona is 64 feet wide from curb to curb. This section is not a circulation element roadway. Parking is not allowed and there is not center left turn lane or bike lanes.

Montemar Drive is a two lane residential road with a posted speed limit of 25 miles per hour. From Austin Drive to the proposed project access, Montemar provides approximately 28 feet of asphalt with a rolled asphalt curb on the south side (project side) and limited (3-5 feet) shoulder. On the north side (opposite project), the unimproved shoulder varies from 6 feet to 8 feet.

Existing Intersections

The following intersections were assessed for level of service within the study area. Count data for each intersection were taken in October 2004.

- Jamacha Boulevard/Sweetwater Springs (signalized)
- Sweetwater Springs/Austin (signalized)
- Sweetwater Springs/Del Rio (signalized)
- Sweetwater Springs/State Route 94 eastbound (signalized)
- Sweetwater Springs/State Route 94 westbound (signalized)
- Agua Dulce/State Route 94 westbound off (stop controlled northbound)
- Austin/Barcelona (four-way stop controlled)

Existing traffic counts, daily and peak hour, are presented on Figure 4. A copy of the traffic counts is located in Appendix A.

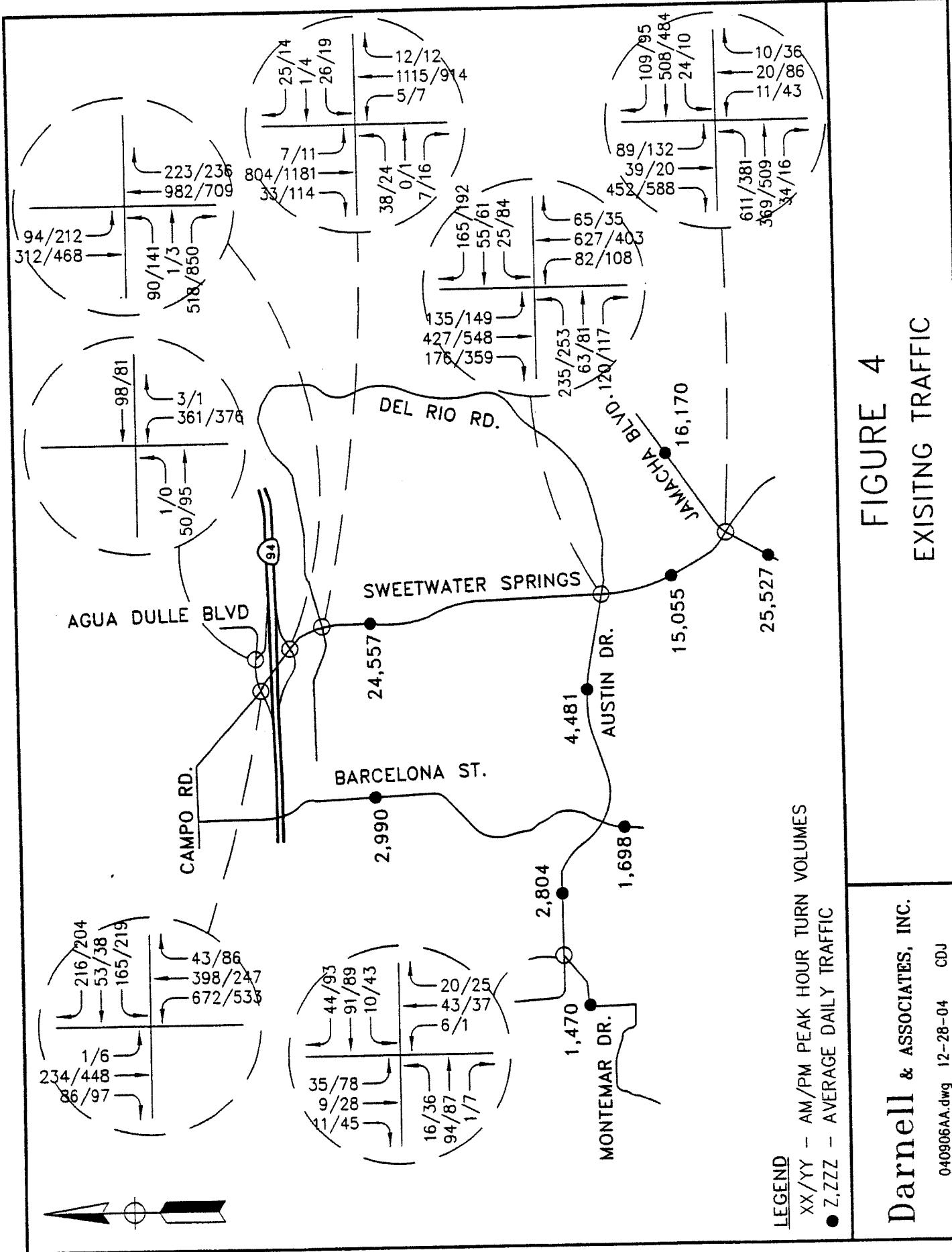


FIGURE 4
EXISTING TRAFFIC

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LEGEND

EXISTING INTERSECTION OPERATION

Existing conditions intersection operation is summarized on Table 2. As shown on Table 2, all intersections currently operate at acceptable levels of service for both peak hours.

TABLE 2 EXISTING INTERSECTION LEVEL OF SERVICE SUMMARY		
AM PEAK HOUR		
Intersection	Existing Conditions	
	Delay sec/veh	LOS
Jamacha/Sweetwater Sp.	25.1	C
Sweetwater Sp/Austin	29.0	C
Sweetwater Sp/Del Rio	17.8	B
Sweetwater Sp/SR94-EB	30.5	C
Sweetwater Sp/SR94-WB	35.3	D
Agua Dulce/SR94-EB Off	12.4	B
Austin/Barcelona	8.0	A
PM PEAK HOUR		
Jamacha/Sweetwater Sp.	24.8	C
Sweetwater Sp/Austin	30.0	C
Sweetwater Sp/Del Rio	18.2	B
Sweetwater Sp/SR94-EB	19.1	B
Sweetwater Sp/SR94-WB	38.4	D
Agua Dulce/SR94-EB Off	13.1	B
Austin/Barcelona	8.9	A
Delay is measured in seconds per vehicle; LOS=level of service; Delay and LOS calculated using HCS 4.1d		

EXISTING ROADWAY SEGMENT OPERATION

Existing conditions roadway segment operation is summarized in Table 3. As shown in Table 3, all roadway segments in the study area currently operate at acceptable levels of service.

TABLE 3
EXISTING ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

Segment	LOS D Capacity	Existing Conditions	
		ADT	LOS
Jamacha: Pointe/Sweetwater	33400	25527	C
Jamacha: Sweetwater/Calavo	33400	16170	B
Barcelona: north of Austin	4500	2990	<C
Barcelona: south of Austin	4500	1698	<C
Montemar: south of Austin	4500	1470	<C
Austin: Montemar/Barcelona	4500	2804	<C
Austin: Barcelona/Sweetwater	10900	4481	C
Sweetwater: Del Rio/Austin	33400	24557	B
Sweetwater: Austin/Jamacha	33400	15055	B

LOS=level of service; ADT=Average daily traffic; <C = better than LOS C
 LOS D Capacity per County of San Diego

SECTION III

PROPOSED PROJECT TRIP GENERATION & DISTRIBUTION

TRIP GENERATION

The proposed project consists of 13 estate dwelling units. Trip rates for this project were obtained from the San Diego Association of Governments (SANDAG) Trip Generation Guide. Trip generation for the project is summarized on Table 4. As shown on Table 4, the project will generate approximately 156 daily trips with 12 morning peak hour and 16 evening peak hour trips.

TRIP DISTRIBUTION

Trip distribution for the proposed project was calculated estimated based on SANDAG select zone assignment for other residential projects in the area, adjusted for access availability. Figure 5 demonstrates the estimated project trip distribution percentage.

Figure 6 shows the project related traffic calculated at intersections and on roadway segments.

TABLE 4 TRIP GENERATION RATES & CALCULATIONS								
		Rates		In	Out			
Estate Dwelling Units	ADT	12 /per dwelling unit		0.5	0.5			
	AM	0.08		0.3	0.7			
	PM	0.1		0.7	0.3			
			AM			PM		
Land Use	Density	ADT	Total	In	Out	Total	In	Out
Single Family Estates	13	156	12	4	8	16	11	5
Number rounding may occur in spreadsheet background								
Rates per SANDAG Trip Generation Guide								

EXISTING PLUS PROJECT TRAFFIC

The proposed project traffic volumes were added to the existing traffic volumes. Existing plus project traffic volumes are shown on Figure 7.

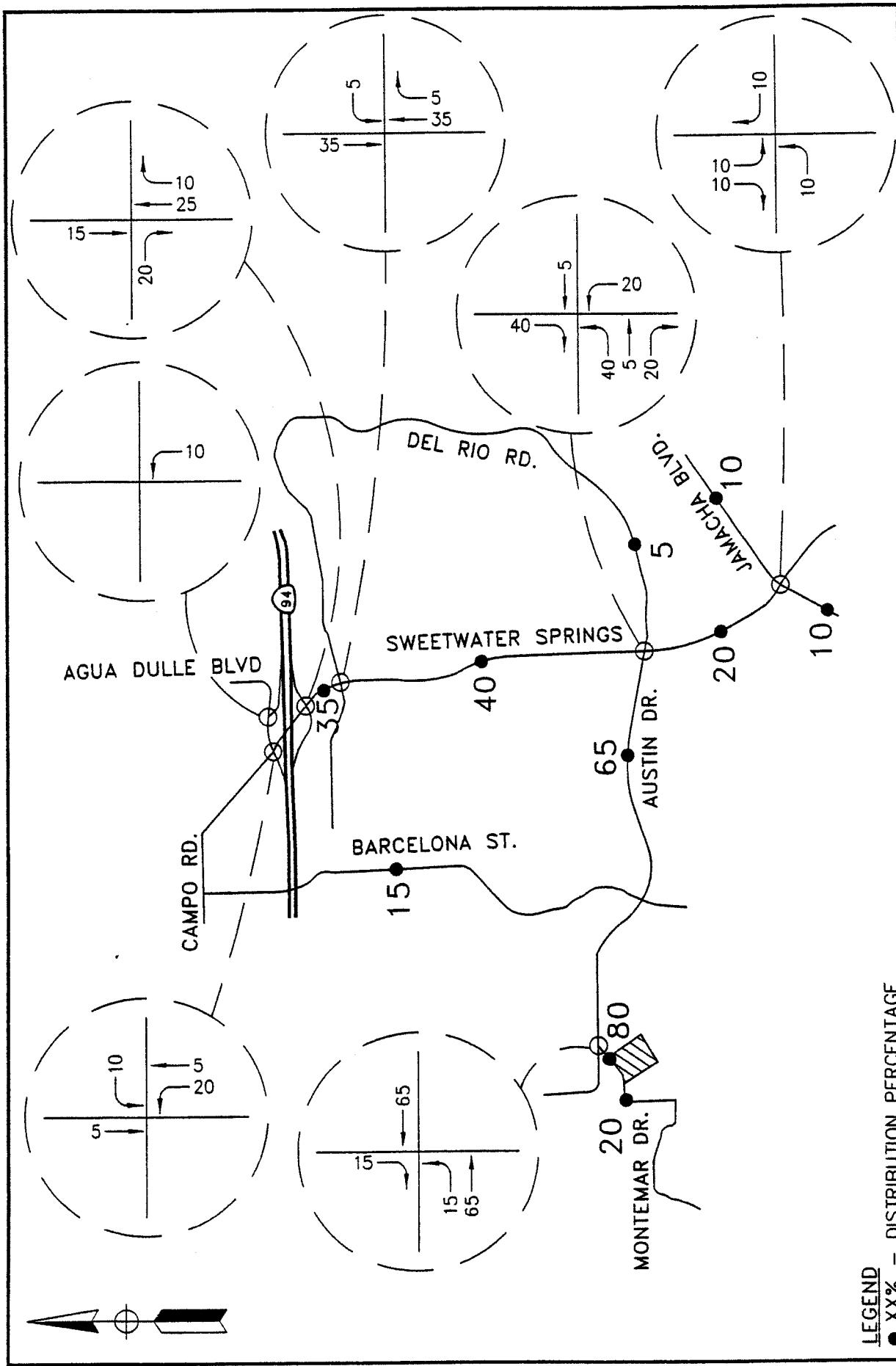


FIGURE 5
PROJECT DISTRIBUTION

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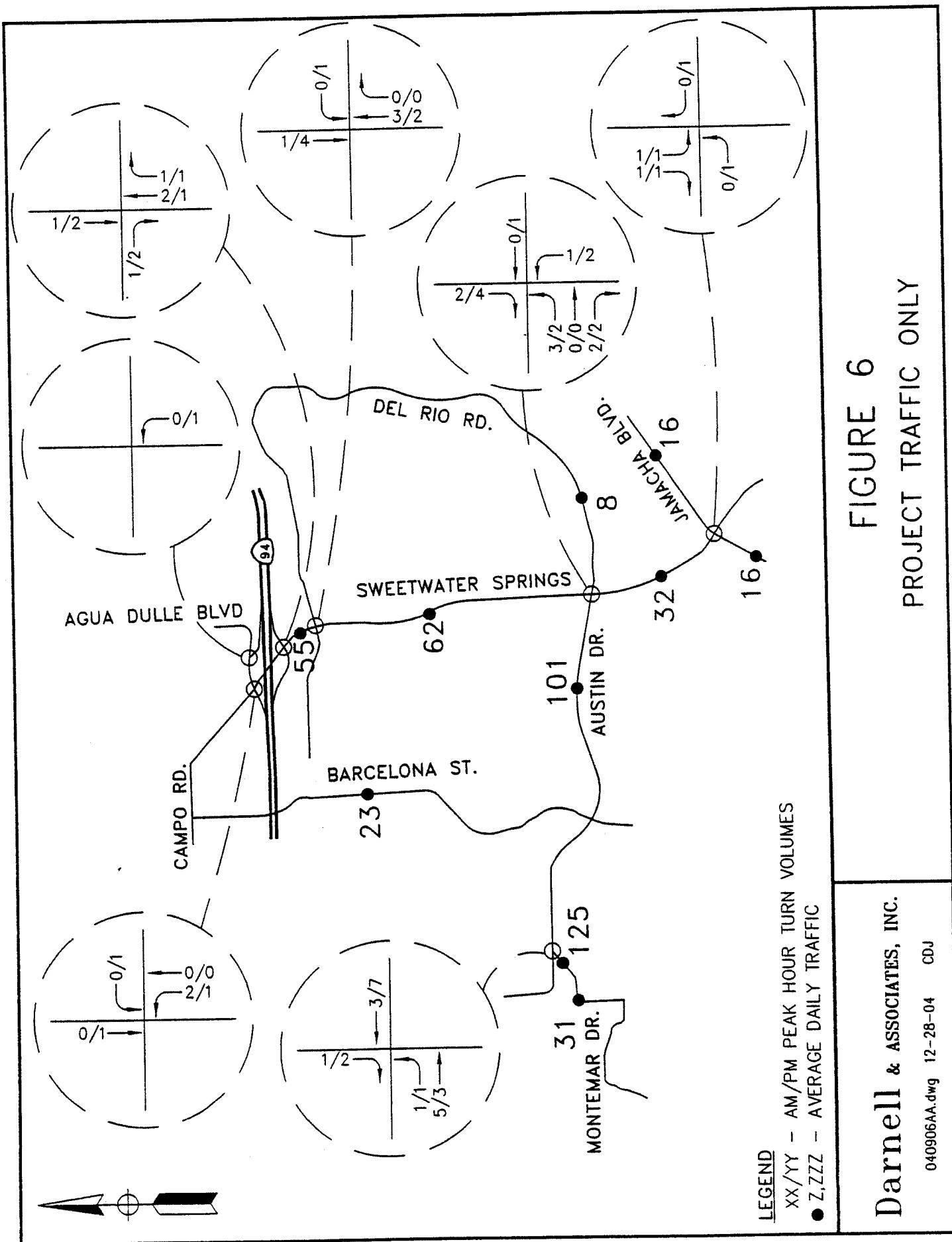
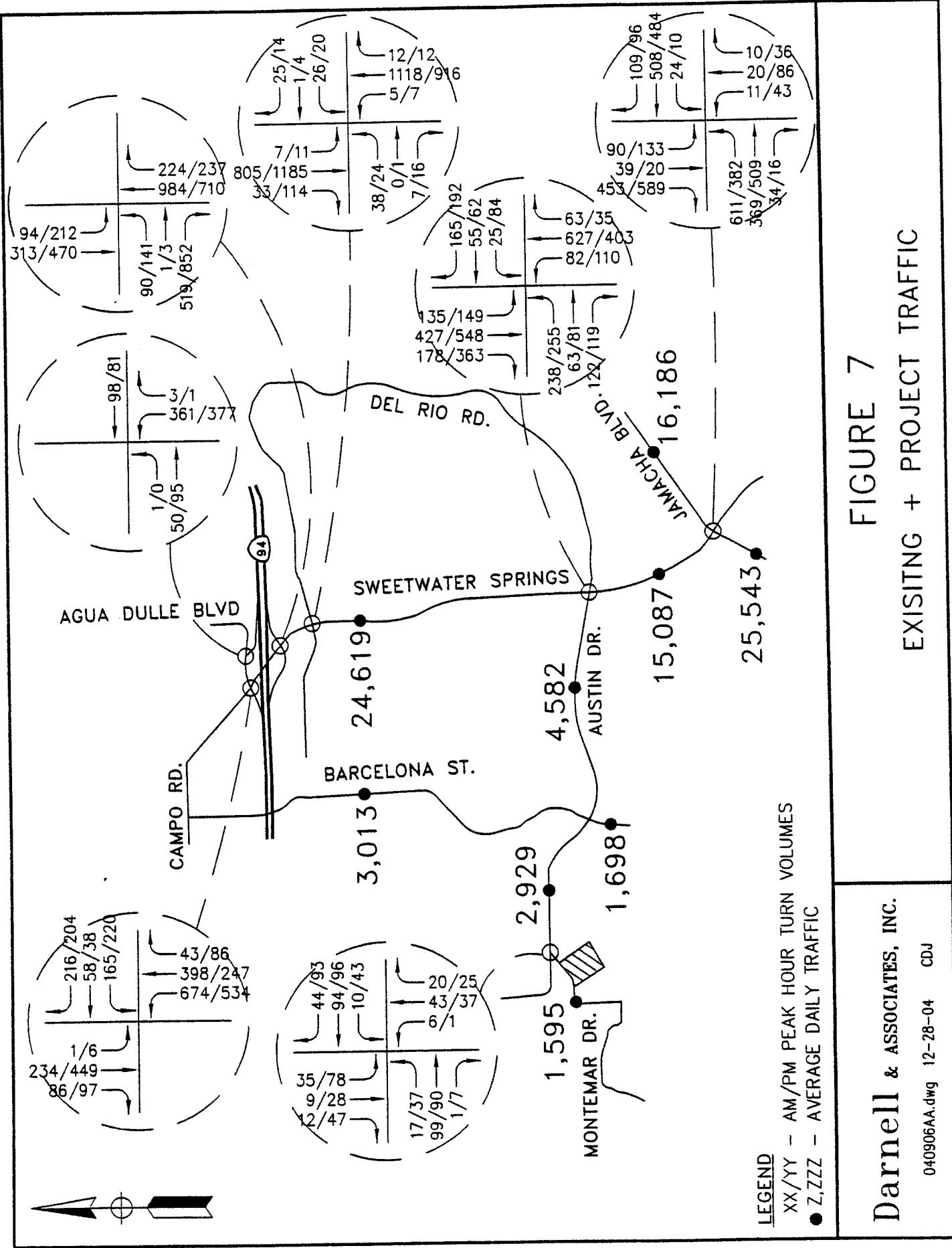


FIGURE 6
PROJECT TRAFFIC ONLY



SECTION IV

NEAR TERM CUMULATIVE TRAFFIC

Other approved/pending projects traffic was generated through research of County records in the project area. The research generated over 100 applications from the County of San Diego within the project study area. These projects were identified for traffic generators as many projects included unmanned wireless antennae, home additions, patios, or other non-traffic generators. The cumulative project count list for traffic generators was reduced to approximately 40 projects to be included in the cumulative analysis.

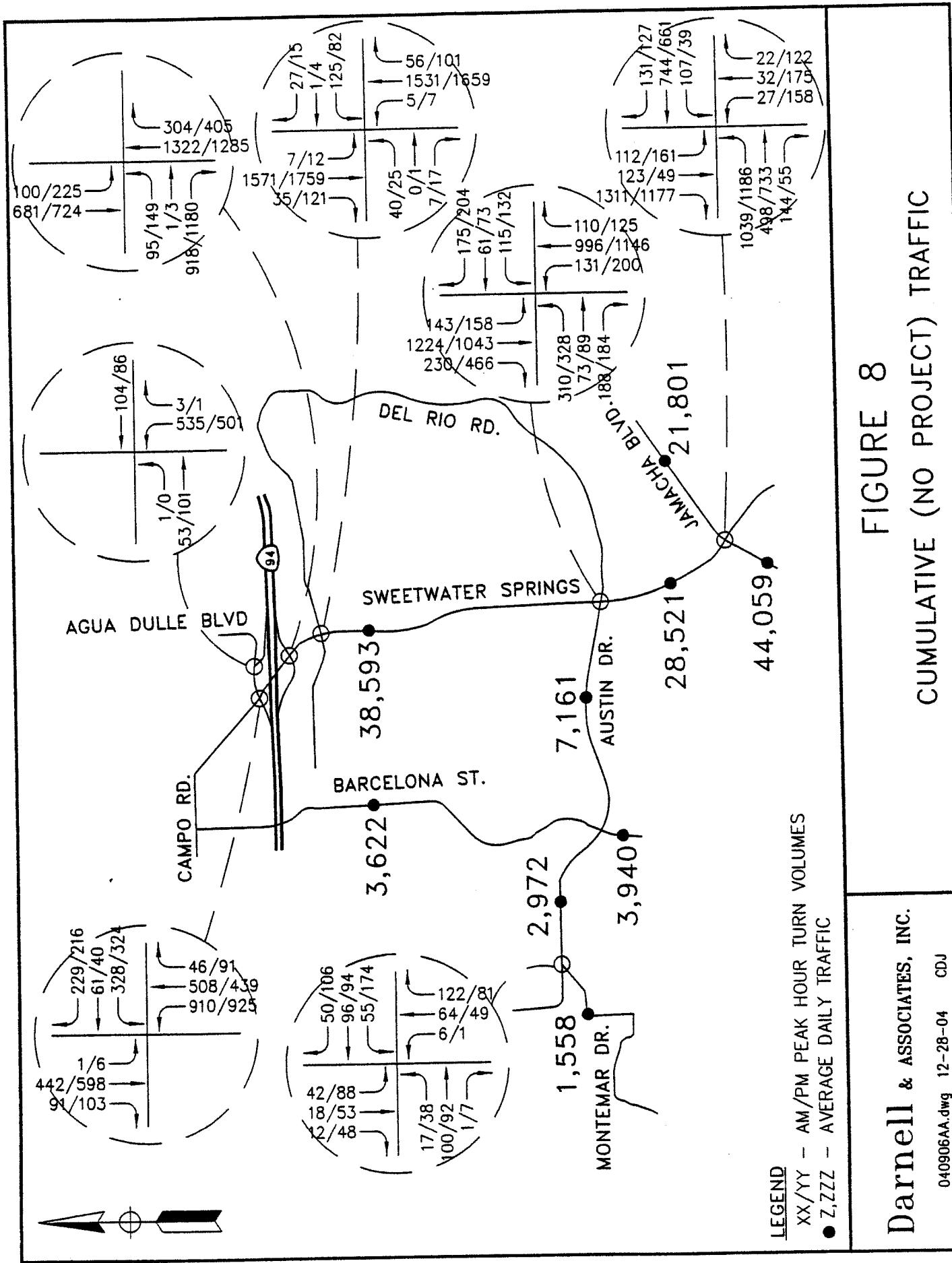
A detailed listing of all projects considered for analysis is provided in Appendix B.

Cumulative projects were divided into traffic analysis zones based on location and traffic was generated and distributed based on each land use density and zone proximity. Cumulative project traffic zones and related trip generation are also provided in Appendix B. Distribution of traffic was conducted and assigned to the study area intersections and roadway segments.

In addition, a growth rate of 2% per year for three (3) years was added to the base volume to account for projects which may not be included in the cumulative list, or those projects which may be processed after the date of this study.

The cumulative project traffic was added to the existing traffic volumes plus the growth rate. The resulting cumulative project traffic volumes are shown on Figure 8.

The Montemar Drive project traffic volumes were added to the cumulative base traffic volumes and represent the near term cumulative traffic condition including the project. These volumes are presented on Figure 9.



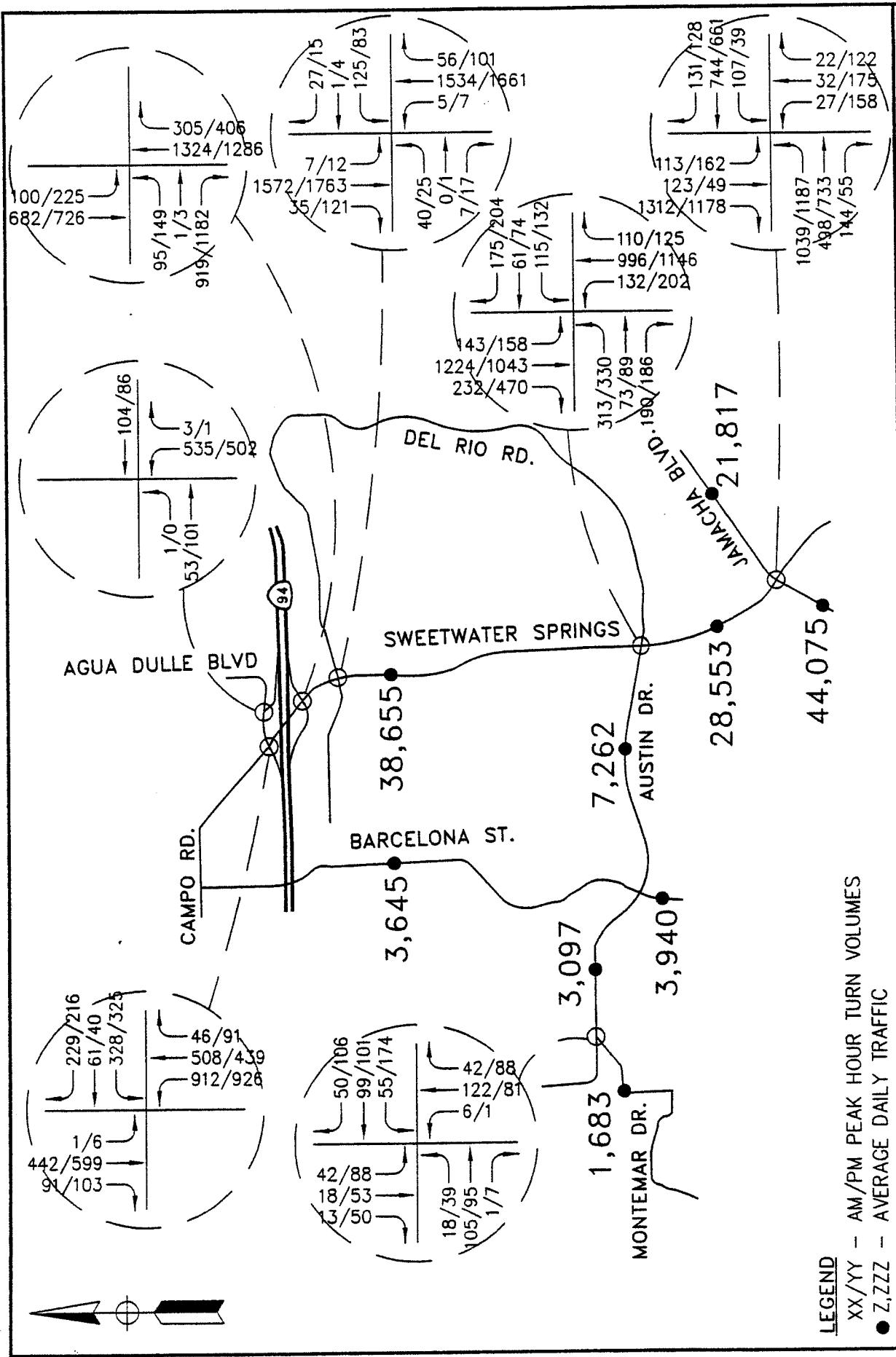


FIGURE 9
CUMULATIVE TRAFFIC (WITH PROJECT)

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SECTION V

IMPACTS

PUBLIC FACILITIES ELEMENT IN COUNTY

According to page XII-4-18 of the *Public Facility Element* for San Diego County, a discretionary project which has a significant impact on roadways will be required, as a condition of approval, to make "improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below 'D' on off-site and on-site abutting Circulation Element roads. New development that would significantly impact congestion on roads at LOS "E" or "F", either currently or as a result of the project, will be denied unless improvements are scheduled to increase the LOS to "D" or better or appropriate mitigation is provided. Appropriate mitigation would include a fair share contribution in the form of road improvements or a fair share contribution to an established program or project. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Section 15091(b) and 15093 of the State CEQA Guidelines."

The *Public Facility Element* for the County of San Diego also requires that all on-site Circulation Element roads operate at Level of Service C or better. If the Level of Service at an on-site Circulation Element road is reduced below LOS C, the proposed project must provide appropriate mitigation measures.

LEVELS OF SIGNIFICANCE STANDARDS

The County of San Diego has recently adopted level of significance standards for direct and cumulative project impacts. These are summarized as follows:

Roadway Segments

The project is deemed to have a significant project impact on a roadway segment if:

The additional or redistribution of ADT generated by the project will cause an adjacent or nearby County Circulation Element roadway to operate below LOS D and will significantly increase congestion as identified in Table 5 (below), and/or:

The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity, and/or:

The addition or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road, State Highway or intersection currently operating at LOS E or LOS F as identified in Table 5 (below).

Signalized Intersections

The project is deemed to have a significant project impact at a signalized intersection if:

The additional or redistribution of ADT generated by the project will cause signalized intersection to operate below LOS D and will significantly increase congestion as identified in Table 5 (below), and/or:

The addition or redistributed ADT generated by the proposed project will significantly increase congestion at a signalized intersection currently operating at LOS E or LOS F as identified in Table 5 (below).

Unsignalized Intersections

The project is deemed to have a significant project impact at an unsignalized intersection if:

The proposed project generates 20 or more peak hour trips to a critical turn movement and cause the unsignalized intersection to operate below LOS D, or

The proposed project generates 20 or more peak hour trips to a critical turn movement and the unsignalized intersection currently operates at LOS E, or

The proposed project generates 5 or more peak hour trips to a critical turn movement and cause the unsignalized intersection to operate below LOS E, or

The proposed project generates 5 or more peak hour trips to a critical turn movement and the unsignalized intersection currently operates at LOS F.

TABLE 5
MEASURES OF SIGNIFICANT PROJECT IMPACTS
ALLOWABLE INCREASES ON CONGESTED ROADS & INTERSECTIONS

ROADWAY SEGMENTS			
	2-Lane Roadway	4-Lane Roadway	6-Lane Roadway
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT
INTERSECTIONS			
	Signalized	Unsignalized	
LOS E	Delay of 2 Seconds	20 pk hour to Critical Movement	
LOS F	Delay of 1 Second, or 5 pk hour to Critical Movement	5 pk hour to Critical Movement	
ALLOWABLE INCREASES ON CIRCULATION ELEMENT ROADS/INTERSECTIONS			
	Roadway Segments	Intersections	
LOS E&F	0.02 Increase to V/C 1 miles per hour speed	2.0 seconds of delay	

LOS = level of service
 ADT = average daily traffic
 V/C = volume to capacity ratio
 pk hour = peak hour trips in the critical movement

EXISTING PLUS PROJECT CONDITIONS

Intersections

Existing plus project intersection operation is summarized on Table 6. As shown on Table 6, all intersections operate at acceptable LOS D or better in both the morning and evening peak hours.

The addition of project traffic does not significantly impact study intersections and the project is not required to mitigate offsite intersections for this condition.

Roadway Segments

Existing plus project roadway segment operation is summarized in Table 7. As shown on Table 7, all roadway segments in the study area operate at acceptable levels of service. No mitigation is required for the existing plus project condition.

TERM CUMULATIVE CONDITIONS

Intersections

Term cumulative intersection analysis is summarized in Table 8. As shown in Table 8, the following intersections demonstrate deficiencies:

Jamacha Boulevard/Sweetwater Springs: This intersection fails with the addition of cumulative projects, including the proposed project and requires additional lanes for adequate level of service. The Montemar project is considered part of the cumulatively significant impact according to County standards

Sweetwater Springs/State Route 94-Westbound: This intersection fails with the addition of cumulative projects, including the proposed project and requires additional lanes for adequate level of service. The Montemar project is considered part of the cumulatively significant impact according to County standards

TABLE 6
EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Existing Conditions		Existing Plus Project					
	Delay sec/veh	LOS	Delay sec/veh	LOS	Δ Delay	Max Critical Movement	Proj. Signif?	Impact?
Jamacha/Sweetwater Sp.	25.1	C	25.1	C	0.0	1	No	No
Sweetwater Sp/Austin	29.0	C	29.1	C	0.1	3	No	No
Sweetwater Sp/Del Rio	17.8	B	17.8	B	0.0	3	No	No
Sweetwater Sp/SR94-EB	30.5	C	30.6	C	0.1	2	No	No
Sweetwater Sp/SR94-WB	35.3	D	35.3	D	0.0	2	No	No
Agua Dulce/SR94-EB Off	12.4	B	12.4	B	0.0	0	No	No
Austin/Barcelona	8.0	A	8.0	A	0.0	5	No	No
PM PEAK HOUR								
Jamacha/Sweetwater Sp.	24.8	C	24.8	C	0.0	1	No	No
Sweetwater Sp/Austin	30.0	C	30.1	C	0.1	2	No	No
Sweetwater Sp/Del Rio	18.2	B	18.2	B	0.0	2	No	No
Sweetwater Sp/SR94-EB	19.1	B	19.1	B	0.0	2	No	No
Sweetwater Sp/SR94-WB	38.4	D	38.6	D	0.2	1	No	No
Agua Dulce/SR94-EB Off	13.1	B	13.1	B	0.0	1	No	No
Austin/Barcelona	8.9	A	8.9	A	0.0	7	No	No

Delay is measured in seconds per vehicle; Δ Delay=change in delay; LOS=level of service;
 Max Critical Movement = maximum vehicles in single critical movement
 Delay and LOS calculated using HCS 4.1d
 Proj Signif? = Project significance based on County thresholds (yes or no)

TABLE 7
EXISTING PLUS PROJECT ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

Segment	LOS D Capacity	Existing Conditions		Existing Plus Project				
		ADT	LOS	ADT	LOS	Proj. Traffic	Proj. Signif?	Impact?
Jamacha: Pointe/Sweetwater	33400	25527	C	25543	C	16	No	No
Jamacha: Sweetwater/Calavo	33400	16170	B	16186	B	16	No	No
Barcelona: north of Austin	4500	2990	<C	3013	<C	23	No	No
Barcelona: south of Austin	4500	1698	<C	1698	<C	0	No	No
Montemar: south of Austin	4500	1470	<C	1595	<C	125	No	No
Austin: Montemar/Barcelona	4500	2804	<C	2929	<C	125	No	No
Austin: Barcelona/Sweetwater	10900	4481	C	4582	C	101	No	No
Sweetwater: Del Rio/Austin	33400	24557	B	24619	B	62	No	No
Sweetwater: Austin/Jamacha	33400	15055	B	15087	B	32	No	No

LOS=level of service; ADT=Average daily traffic; <C = better than LOS C
Proj. Signif? = Project significance based on County Standards (Yes or No)
LOS D Capacity per County of San Diego

TABLE 8
NEAR TERM INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	AM PEAK HOUR											
	Existing Condition (A)		Near Term (B)		Near Term+Project (C)		Cuml. Contribution (C)-(A)		Project Contribution (C)-(B)			
	Delay sec/veh	LOS	Delay sec/veh	LOS	Delay sec/veh	LOS	Δ Delay	Cuml. Impact?	Δ Delay	Entering Volumes	Project Percent	Cuml. Signif?
Jamacha/Sweetwater Sp.	25.1	C	96.9	F	97.0	F	71.9	Yes	0.1	2	0.10%	Yes
Sweetwater Sp/Austin	29.0	C	46.4	D	47.1	D	18.1	No	0.7	n/a	n/a	No
Sweetwater Sp/Del Rio	17.8	B	37.7	D	38.0	D	20.2	No	0.3	n/a	n/a	No
Sweetwater Sp/SR94-EB	30.5	C	47.6	D	47.8	D	17.3	No	0.2	n/a	n/a	No
Sweetwater Sp/SR94-WB	35.3	D	108.1	F	108.5	F	73.2	Yes	0.4	2	0.18%	Yes
Agua Dulce/SR94-EB Off	12.4	B	16.6	C	16.6	C	4.2	No	0.0	n/a	n/a	No
Austin/Barcelona	8.0	A	8.9	A	8.9	A	0.9	No	0.0	n/a	n/a	No
PM PEAK HOUR												
Jamacha/Sweetwater Sp.	24.8	C	164.5	F	165.4	F	140.6	Yes	0.9	4	0.27%	Yes
Sweetwater Sp/Austin	30.0	C	54.2	D	54.8	D	24.8	No	0.6	n/a	n/a	No
Sweetwater Sp/Del Rio	18.2	B	45.0	D	45.5	D	27.3	No	0.5	n/a	n/a	No
Sweetwater Sp/SR94-EB	19.1	B	27.1	C	27.2	C	8.1	No	0.1	n/a	n/a	No
Sweetwater Sp/SR94-WB	38.4	D	129.0	F	129.6	F	91.2	Yes	0.6	3	0.35%	Yes
Agua Dulce/SR94-EB Off	13.1	B	16.6	C	16.6	C	3.5	No	0.0	n/a	n/a	No
Austin/Barcelona	8.9	A	11.3	B	11.5	B	2.6	No	0.2	n/a	n/a	No

Delay is measured in seconds per vehicle; Δ Delay=change in delay; LOS=level of service;

Delay and LOS calculated using HCS 4.1d; Entering Volumes = total project within intersection

Project significance based on County thresholds; Project percent = project traffic divided by cumulative minus existing entering traffic

Roadway Segments

Roadway segment operation for the cumulative condition is summarized in Table 9. As shown in Table 9, the following roadway segments demonstrate deficiencies:

Jamacha Boulevard from Pointe Parkway to Sweetwater Springs: This section fails in the cumulative condition as a four-lane facility. The Montemar project is considered part of the cumulatively significant impact according to County standard.

Sweetwater Springs from Del Rio to Austin: This section fails in the cumulative condition as a four-lane facility using the daily capacity methodology. The Montemar project is considered part of the cumulatively significant impact according to the County standards.

TABLE 9
NEAR TERM ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

Segment	LOS D Capacity	Existing (A)		Near Term (B)		Near Term Plus Project (C)		Cumulative Contribution (C)-(A)		Project Contribution (C)-(B)	
		ADT	LOS	ADT	LOS	ADT	LOS	Incr. ADT	Cuml. Impact?	Proj. ADT	Proj. %
Jamacha: Pointe/Sweetwater	33400	25527	C	44059	F	44075	F	Yes	18548	Yes	16 0.09%
Jamacha: Sweetwater/Calavo	33400	16170	B	21801	B	21817	B	No	5647	No	16 n/a
Barcelona: north of Austin	4500	2990	<C	3622	<C	3645	<C	No	655	No	23 n/a
Barcelona: south of Austin	4500	1698	<C	3940	<C	3940	<C	No	2242	No	0 n/a
Montemar: south of Austin	4500	1470	<C	1558	<C	1683	<C	No	213	No	125 n/a
Austin: Montemar/Barcelona	4500	2804	<C	2972	<C	3097	<C	No	293	No	125 n/a
Austin: Barcelona/Sweetwater	10900	4481	C	7161	D	7262	D	No	2781	No	101 n/a
Sweetwater: Del Rio/Austin	33400	24557	B	38593	F	38655	F	Yes	14098	Yes	62 0.44%
Sweetwater: Austin/Jamacha	33400	15055	B	28521	C	28553	C	No	13498	No	32 n/a

LOS=level of service; ADT=Average daily traffic; <C=better than LOS C

n/a = not applicable (LOS is not applicable to non-circulation element roadways)

Cuml. Signif? = Cumulative significance based on County Standards (Yes or No)

LOS D Capacity per County of San Diego Public Road Standards

SECTION VI

ACCESS & SIGHT DISTANCE

As shown on the project site plan, the project proposes access from the southeast side of Montemar Drive, approximately 230 feet southwest of Austin Drive. The proposed driveway can be accommodated with a stop control and a single lane of egress.

The driveway maintains adequate distance from Austin Drive, eliminating potential queuing on Montemar in front of the driveway.

No additional lanes of ingress are required to serve the small residential development.

The applicant must assure and maintain adequate unobstructed sight distance both directions from the project access along Montemar Drive to the satisfaction of the County Engineer.

Cul-de-sac lengths require review from the County Fire Department to ensure maximum distances between emergency vehicle access points are maintained.

SIGHT DISTANCE

At the proposed project driveway, Montemar Drive is level and provides adequate sight distance both directions (minimum of 250 feet).

The off-site intersection of Montemar Drive and Austin Drive has a skewed angle, however, the traffic control provides a stop sign for eastbound Austin (westbound Austin to southbound Montemar is a free movement; northbound Montemar to eastbound Austin is a free movement). The movement from eastbound Austin to westbound Austin has adequate sight distance from the existing stop bar to see traffic on westbound Austin and northbound Montemar. Traffic desiring to turn left from northbound Montemar to westbound Austin can queue to a safe position to view westbound Austin traffic without sight distance limitations. No sight distance improvements are required for this off-site, existing intersection.

SECTION VII

MITIGATION MEASURES

DIRECT IMPACTS

Intersections and Roadways

The project does not demonstrate direct impacts at study intersections or roadway segments. No project mitigation is required based on direct impacts at off-site intersections or on roadway segments.

CUMULATIVE IMPACTS

The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portion of San Diego County. This program includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected build out (year 2030) development conditions on the existing circular element roadway network throughout the unincorporated area of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement projects funded by other public funding sources, such as TransNet, gas tax, and grants. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway buildup over the next 30 years, will use funds from TransNet, state, and federal funding to improve freeways to projected level of service objectives in the RTP.

The proposed project generates 156 ADT. These trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. These project trips therefore contribute to a potential significant cumulative impact and mitigation is required. The potential growth represented by this project was included in the growth projections upon which the TIF program is based. Therefore, payment of the TIF, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to less than significant.

APPENDIX A

Traffic Counts

Volumes for: Thursday, October 07, 2004

City: Spring Valley

Project #: 04-4329-002

Location: Austin Dr. Btwn Montemar & S. Barcelona

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			1	4	12:00			10	14
00:15			3	1	12:15			17	17
00:30			1	1	12:30			17	21
00:45			0	5	12:45			21	65 11 63 128
01:00			1	3	13:00			10	21
01:15			0	1	13:15			13	22
01:30			1	1	13:30			19	13
01:45			0	2	13:45			19	61 16 72 133
02:00			1	1	14:00			23	29
02:15			1	0	14:15			15	19
02:30			1	0	14:30			36	22
02:45			0	3	14:45			38	112 62 132 244
03:00			0	0	15:00			23	42
03:15			0	1	15:15			20	34
03:30			0	0	15:30			21	29
03:45			0	0	15:45			36	100 37 142 242
04:00			1	0	16:00			31	44
04:15			0	1	16:15			28	36
04:30			4	0	16:30			19	36
04:45			1	6	16:45			38	116 33 149 265
05:00			2	1	17:00			25	40
05:15			2	2	17:15			24	38
05:30			4	1	17:30			35	29
05:45			13	21	17:45			20	104 25 132 236
06:00			7	5	18:00			17	25
06:15			9	7	18:15			20	12
06:30			16	12	18:30			15	42
06:45			40	72	18:45			26	78 31 110 188
07:00			23	34	19:00			23	20
07:15			18	17	19:15			11	24
07:30			21	16	19:30			15	17
07:45			26	88	19:45			13	62 23 84 146
08:00			33	29	20:00			10	15
08:15			46	32	20:15			10	12
08:30			17	31	20:30			7	12
08:45			21	117	20:45			12	39 9 48 87
09:00			20	20	21:00			13	8
09:15			18	21	21:15			5	12
09:30			15	18	21:30			7	9
09:45			20	73	21:45			6	31 12 41 72
10:00			17	20	22:00			7	6
10:15			19	18	22:15			2	2
10:30			20	15	22:30			2	11
10:45			21	77	22:45			6	17 5 24 41
11:00			18	12	23:00			3	3
11:15			17	10	23:15			1	1
11:30			12	18	23:30			1	3
11:45			19	66	23:45			5	10 1 8 18

Total Vol.

530 474 1004

795 1005 1800

Daily Totals

NB SB EB WB Combined

1325 1479 2804

AM

Split % 52.8% 47.2% 35.8%

PM

44.2% 55.8% 64.2%

Peak Hour 07:30 07:45 07:45

16:45 14:45 14:30

Volume P.H.F.

126 116 238 0.68 0.91 0.76

122 167 277 0.80 0.67 0.69

Volumes for: Thursday, October 07, 2004

City: Spring Valley

Project #: 04-4329-001

Location: Montemar Dr. S/o Austin Dr

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	2			12:00	16	18		
00:15	0	2			12:15	14	9		
00:30	0	1			12:30	5	14		
00:45	0	1	6		6	12:45	7	42	13 54
									96
01:00	0	0			13:00	5	13		
01:15	0	0			13:15	9	9		
01:30	2	0			13:30	9	15		
01:45	0	2	0	0	2	13:45	9	32	11 48
									80
02:00	0	1			14:00	7	20		
02:15	2	0			14:15	7	14		
02:30	0	2			14:30	7	6		
02:45	0	2	1	4	6	14:45	12	33	16 56
									89
03:00	0	1			15:00	14	13		
03:15	0	1			15:15	9	15		
03:30	0	1			15:30	12	22		
03:45	2	2	0	3	5	15:45	12	47	10 60
									107
04:00	0	2			16:00	21	14		
04:15	0	2			16:15	21	19		
04:30	0	1			16:30	21	14		
04:45	2	2	3	8	10	16:45	14	77	19 66
									143
05:00	2	2			17:00	37	13		
05:15	5	3			17:15	28	10		
05:30	2	2			17:30	23	16		
05:45	9	18	2	9	27	17:45	2	90	17 56
									146
06:00	2	2			18:00	2	19		
06:15	2	5			18:15	7	22		
06:30	9	7			18:30	7	13		
06:45	14	27	15	29	56	18:45	2	18	12 66
									84
07:00	5	28			19:00	5	16		
07:15	7	18			19:15	12	3		
07:30	5	10			19:30	2	10		
07:45	12	29	24	80	109	19:45	7	26	6 35
									61
08:00	5	22			20:00	9	6		
08:15	14	14			20:15	14	5		
08:30	2	10			20:30	12	2		
08:45	2	23	13	59	82	20:45	14	49	6 19
									68
09:00	2	10			21:00	12	5		
09:15	2	6			21:15	9	7		
09:30	9	8			21:30	2	6		
09:45	5	18	7	31	49	21:45	2	25	5 23
									48
10:00	12	7			22:00	0	6		
10:15	9	8			22:15	2	4		
10:30	7	7			22:30	2	2		
10:45	14	42	14	36	78	22:45	2	6	2 14
									20
11:00	2	4			23:00	0	3		
11:15	21	4			23:15	2	2		
11:30	18	11			23:30	0	1		
11:45	16	57	14	33	90	23:45	0	2	0 6
									8
Total Vol.	222	298			520		447	503	
									950

Daily Totals

	NB	SB	EB	WB	Combined
	669	801			1470

PM

64.6

AM

35.4%

47.1% 52.9%

Split %

42.7% 57.3%

16:45

Peak Hour

11:15 07:00

11:15

16:45 17:30

16

Volume

71 80

118

102 74

0.8

P.H.F.

0.85 0.71

0.87

0.72 0.84

A 2

Volumes for: Thursday, October 07, 2004

City: Spring Valley

Project #: 04-4329-003

Location: Austin Dr. Btwn S. Barcenola & Sweetwater Springs

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			2	2		12:00		30	27
00:15			1	2		12:15		32	26
00:30			4	1		12:30		25	43
00:45			0	7	2	12:45	14	35	122 22 118 240
01:00			3	3		13:00		27	27
01:15			0	3		13:15		29	34
01:30			1	2		13:30		34	24
01:45			0	4	2	13:45	10 14	32	122 27 112 234
02:00			1	1		14:00		32	40
02:15			2	2		14:15		29	34
02:30			0	0		14:30		42	44
02:45			0	3	2	14:45	5 8	50	153 73 191 344
03:00			0	0		15:00		45	65
03:15			0	1		15:15		36	44
03:30			0	0		15:30		35	46
03:45			2	2	0	15:45	1 3	46	162 54 209 371
04:00			1	2		16:00		44	52
04:15			0	1		16:15		32	59
04:30			4	0		16:30		46	52
04:45			3	8	3	16:45	6 14	47	169 39 202 371
05:00			5	1		17:00		40	72
05:15			6	2		17:15		56	65
05:30			8	1		17:30		50	53
05:45			20	39	4	17:45	8 47	31	177 48 238 415
06:00			10	12		18:00		25	40
06:15			10	10		18:15		31	29
06:30			19	11		18:30		63	46
06:45			45	84	27	18:45	60 144	45	164 50 165 329
07:00			47	42		19:00		31	36
07:15			26	33		19:15		14	33
07:30			35	27		19:30		15	27
07:45			36	144	26	19:45	128 272	19	79 35 131 210
08:00			40	37		20:00		14	19
08:15			51	58		20:15		20	17
08:30			37	37		20:30		15	20
08:45			40	168	28	20:45	160 328	11	60 18 74 134
09:00			30	27		21:00		12	15
09:15			40	20		21:15		18	23
09:30			41	21		21:30		5	15
09:45			42	153	18	21:45	86 239	12	47 18 71 118
10:00			38	26		22:00		8	15
10:15			37	30		22:15		3	6
10:30			40	31		22:30		5	12
10:45			41	156	30	22:45	117 273	6	22 5 38 60
11:00			39	26		23:00		3	1
11:15			50	22		23:15		1	5
11:30			42	18		23:30		5	3
11:45			41	172	36	23:45	102 274	5	14 2 11 25

Total Vol.

940 690 1630

1291 1560 2851

Split %	Daily Totals		
	NB	SB	EB
	2231	2250	4481

AM

57.7% 42.3% 36.4%

PM

45.3% 54.7% 63.6%

Peak Hour

10:45 08:00 08:00

16:45 17:00 16:45

Volume P.H.F.

172 160 328
0.86 0.69 0.75193 238 422
0.86 0.83 0.87

A3

Volumes for: Tuesday, October 12, 2004

City: Spring Valley

Project #: 04-4329-004

Location: Sweetwater Springs Btwn Del Rio & Austin Dr

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	26	21			12:00	151	150		
00:15	9	26			12:15	175	209		
00:30	9	20			12:30	157	181		
00:45	10	54	29	96	150	12:45	174	657	173
							713		1370
01:00	11	22			13:00	156	138		
01:15	9	10			13:15	145	151		
01:30	2	19			13:30	145	138		
01:45	5	27	21	72	99	13:45	181	627	178
							605		1232
02:00	5	10			14:00	192	318		
02:15	6	15			14:15	220	181		
02:30	10	11			14:30	200	241		
02:45	13	34	16	52	86	14:45	253	865	222
							962		1827
03:00	14	11			15:00	244	301		
03:15	12	10			15:15	197	268		
03:30	10	5			15:30	178	271		
03:45	25	61	9	35	96	15:45	158	777	277
							1117		1894
04:00	22	5			16:00	215	285		
04:15	26	12			16:15	188	294		
04:30	31	14			16:30	215	287		
04:45	49	128	16	47	175	16:45	197	815	272
							1138		1953
05:00	56	15			17:00	267	274		
05:15	79	20			17:15	197	326		
05:30	121	31			17:30	213	302		
05:45	126	382	59	125	507	17:45	218	895	312
							1214		2109
06:00	133	60			18:00	148	258		
06:15	161	59			18:15	181	242		
06:30	184	115			18:30	150	193		
06:45	215	693	155	389	1082	18:45	170	649	233
							926		1575
07:00	283	256			19:00	138	217		
07:15	253	180			19:15	89	181		
07:30	335	171			19:30	107	144		
07:45	315	1186	240	847	2033	19:45	62	396	144
							686		1082
08:00	232	256			20:00	90	169		
08:15	249	193			20:15	77	144		
08:30	197	133			20:30	82	151		
08:45	196	874	154	736	1610	20:45	114	363	162
							626		989
09:00	145	115			21:00	122	108		
09:15	185	122			21:15	102	151		
09:30	174	115			21:30	41	96		
09:45	144	648	101	453	1101	21:45	59	324	90
							445		769
10:00	150	95			22:00	66	84		
10:15	156	100			22:15	48	101		
10:30	145	99			22:30	30	73		
10:45	138	589	112	406	995	22:45	40	184	61
							319		503
11:00	118	101			23:00	24	38		
11:15	132	123			23:15	31	58		
11:30	139	126			23:30	24	66		
11:45	145	534	139	489	1023	23:45	16	95	40
							202		297

Total Vol.	5210	3747	8957	6647	8953	15600
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			Daily Totals		
			NB	SB	EB
					WB
					Combined
			11857	12700	24557

	AM			PM		
Split %	58.2%	41.8%	36.5%	42.6%	57.4%	63.5%
Peak Hour	07:00	07:30	07:00	14:15	17:00	17:00
Volume	1186	860	2033	917	1214	2109
P.H.F.	0.89	0.84	0.92	0.92	0.93	0.97

Volumes for: Tuesday, October 12, 2004

City: Spring Valley

Project #: 04-4329-005

Location: Sweetwater Springs Btwn Austin & Jamacha Blvd

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	10	26			12:00	100	59		
00:15	9	20			12:15	115	82		
00:30	8	22			12:30	122	89		
00:45	4	31	10	78	109	116	453	70	300
									753
01:00	11	15			13:00	102	92		
01:15	8	12			13:15	88	60		
01:30	4	10			13:30	131	58		
01:45	12	35	12	49	84	141	462	75	285
									747
02:00	7	5			14:00	200	91		
02:15	4	5			14:15	141	74		
02:30	2	4			14:30	184	56		
02:45	5	18	5	19	37	195	720	95	316
									1036
03:00	5	2			15:00	206	95		
03:15	7	4			15:15	151	54		
03:30	4	4			15:30	171	102		
03:45	8	24	9	19	43	184	712	70	321
									1033
04:00	12	4			16:00	217	76		
04:15	15	5			16:15	183	96		
04:30	10	12			16:30	105	211		
04:45	31	68	9	30	98	16:45	98	603	183
									566
05:00	15	12			17:00	127	215		
05:15	23	22			17:15	92	264		
05:30	45	31			17:30	109	227		
05:45	86	169	26	91	260	17:45	211	539	152
									858
06:00	90	44			18:00	115	131		
06:15	98	41			18:15	101	97		
06:30	147	78			18:30	126	102		
06:45	201	536	51	214	750	18:45	102	444	122
									452
07:00	220	136			19:00	95	95		
07:15	155	111			19:15	65	91		
07:30	164	142			19:30	87	56		
07:45	184	723	147	536	1259	19:45	61	308	51
									293
08:00	215	172			20:00	49	70		
08:15	201	126			20:15	50	76		
08:30	125	134			20:30	64	77		
08:45	90	631	98	530	1161	20:45	50	213	78
									301
09:00	145	112			21:00	56	66		
09:15	155	122			21:15	50	45		
09:30	115	115			21:30	31	56		
09:45	125	541	102	451	992	21:45	20	157	71
									238
10:00	115	98			22:00	46	45		
10:15	110	95			22:15	20	39		
10:30	86	50			22:30	17	45		
10:45	84	395	61	304	699	22:45	10	93	51
									180
11:00	80	60			23:00	19	20		
11:15	89	45			23:15	11	31		
11:30	102	63			23:30	12	20		
11:45	121	392	40	208	600	23:45	10	52	26
									97
Total Vol.	3563	2529			6092		4756	4207	
									8963

Split %	Daily Totals			
	NB	SB	WB	
	8319	6736		15055

AM

40.5%

53.1% 46.9%

59.5%

Peak Hour

Volume

P.H.F.

07:30

1351

0.87

15:30 16:45

755 889

0.91 0.84

17:00

1397

0.96

AS

Volumes for: Tuesday, October 12, 2004

City: Spring Valley

Project #: 04-4329-006

Location: Jamacha Blvd E/o Sweetwater Springs

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			17	31		12:00		80	106
00:15			26	30		12:15		85	116
00:30			14	44		12:30		122	95
00:45			10	67	51	156	223	116	403
					12:45			112	429
01:00			12	19		13:00		91	105
01:15			15	26		13:15		80	113
01:30			11	20		13:30		102	112
01:45			7	45	18	83	128	95	368
					13:45			123	453
02:00			9	26		14:00		105	101
02:15			11	26		14:15		137	126
02:30			11	19		14:30		151	123
02:45			7	38	10	81	119	126	487
					14:45			519	1006
03:00			4	11		15:00		105	112
03:15			5	17		15:15		168	129
03:30			6	15		15:30		159	113
03:45			12	27	10	53	80	144	576
					15:45			153	507
04:00			10	8		16:00		165	127
04:15			10	17		16:15		150	149
04:30			22	20		16:30		167	126
04:45			15	57	25	70	127	160	642
					16:45			146	548
05:00			25	24		17:00		186	123
05:15			15	31		17:15		162	149
05:30			33	42		17:30		180	127
05:45			34	107	55	152	259	150	678
					17:45			113	512
06:00			34	94		18:00		155	122
06:15			70	140		18:15		115	141
06:30			84	133		18:30		130	96
06:45			87	275	125	492	767	131	531
					18:45			102	461
07:00			109	176		19:00		95	116
07:15			103	157		19:15		75	123
07:30			97	160		19:30		83	122
07:45			124	433	153	646	1079	101	354
					19:45			110	471
08:00			95	155		20:00		74	85
08:15			112	101		20:15		64	101
08:30			126	95		20:30		92	75
08:45			138	471	105	456	927	85	315
					20:45			82	343
09:00			134	115		21:00		66	89
09:15			169	122		21:15		51	80
09:30			142	94		21:30		45	88
09:45			131	576	94	425	1001	51	213
					21:45			51	308
10:00			130	116		22:00		69	62
10:15			125	115		22:15		50	50
10:30			115	109		22:30		56	60
10:45			69	439	75	415	854	50	225
					22:45			69	241
11:00			95	94		23:00		51	38
11:15			99	84		23:15		23	61
11:30			74	62		23:30		34	52
11:45			96	364	86	326	690	25	133
					23:45			48	199
Total Vol.			2899	3355	6254			4957	4959
								9916	

Split %	AM			PM		
	NB	SB	EB	WB	Combined	
	46.4%	53.6%	38.7%	50.0%	50.0%	61.3%

Peak Hour	08:45	07:00	07:00	16:45	15:45	16:45
Volume P.H.F.	583 0.86	646 0.92	1079 0.95	688 0.92	555 0.91	1233 0.99

76

Volumes for: Friday, October 08, 2004

City: Spring Valley

Project #: 04-4329-007

Location: Jamacha Blvd W/o Sweetwater Springs

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			20	44		12:00		120	148
00:15			31	50		12:15		148	161
00:30			26	66		12:30		172	144
00:45			10	87	59	219	306	12:45	161 601 115 568 1169
01:00			19	33		13:00		148	184
01:15			22	30		13:15		130	153
01:30			10	31		13:30		151	141
01:45			16	67	44	138	205	13:45	150 579 174 652 1231
02:00			16	26		14:00		174	251
02:15			15	41		14:15		172	212
02:30			11	20		14:30		154	245
02:45			10	52	22	109	161	14:45	201 701 261 969 1670
03:00			18	20		15:00		198	315
03:15			14	21		15:15		190	266
03:30			15	29		15:30		174	241
03:45			14	61	22	92	153	15:45	184 746 291 1113 1859
04:00			15	20		16:00		201	268
04:15			22	21		16:15		223	242
04:30			20	31		16:30		256	256
04:45			31	88	42	114	202	16:45	208 888 261 1027 1915
05:00			56	37		17:00		237	316
05:15			41	34		17:15		226	232
05:30			72	64		17:30		211	238
05:45			101	270	95	230	500	17:45	226 900 258 1044 1944
06:00			121	101		18:00		191	269
06:15			110	144		18:15		148	221
06:30			155	211		18:30		171	220
06:45			223	609	255	711	1320	18:45	185 695 215 925 1620
07:00			237	245		19:00		147	151
07:15			217	221		19:15		151	149
07:30			254	253		19:30		126	160
07:45			276	984	218	937	1921	19:45	115 539 255 715 1254
08:00			270	234		20:00		102	189
08:15			245	208		20:15		118	170
08:30			223	188		20:30		125	188
08:45			170	908	154	784	1692	20:45	112 457 175 722 1179
09:00			184	155		21:00		101	141
09:15			133	121		21:15		97	134
09:30			130	120		21:30		74	156
09:45			135	582	123	519	1101	21:45	75 347 122 553 900
10:00			130	122		22:00		85	112
10:15			136	120		22:15		81	97
10:30			138	125		22:30		77	101
10:45			140	544	124	491	1035	22:45	51 294 126 436 730
11:00			126	122		23:00		55	87
11:15			141	116		23:15		50	51
11:30			128	136		23:30		31	74
11:45			126	521	117	491	1012	23:45	42 178 58 270 448
Total Vol.			4773	4835	9608			6925	8994 15919

Split %	Daily Totals		
	NB	SB	Combined
	11698	13829	25527

AM

Split %	49.7%	50.3%	37.6%
Peak Hour	07:30	06:45	07:30
Volume P.H.F.	1045 0.95	974 0.95	1958 0.97

PM

43.5%	56.5%	62.4%
16:30	15:00	16:15
927 0.91	1113 0.88	1999 0.90

APPENDIX B
Cumulative Projects

County Processing #	Project Name	Project Description	Project Location	Last Date of Action	Project Status
A11P-01-016	Jamacha Mini Washhouse	three model houses	indianola (elizalda RCV)	4-3-2002	
A11P-01-014	Casa de Amparo	Children's shelter (11.43 acres), 52 children	Buena Creek Road	2/25/2003	
A11P-01-118	Paradise Valley Telecom	communications facility at top of cornerstone christian church	730 Conception Avenue	approved 11/19/98	
A11P-01-180	WITHDRAWN		WITHDRAWN	withdrawn 4/25/01	
A11P-01-401	Bancroft Baptist Church	wireless pole	2300 Bancroft Baptist Drive	8/1/2000	
A11P-01-401	Mount Miguel Covenant Village	1-unit guest facility	325 Kempton Street (nw corner San Carlos/Conception)	approved 12/18/98	
A11P-01-426	WITHDRAWN			withdrawn 3/12/02	
A11P-09-022	Exterior Car Wash	1203 sq ft car wash	2865 Sweetwater Road	10-14-1999	
I-01-01-013	Support Meal	small restaurant at existing facility	SE corner Jamacha Blvd/Sweetwater Springs	approved 4/24/03	
P-01-010	Torres	Group care home 15,954 sq ft (total site)	963 Villaspie	3-15-2004	
I-1-01-01	Lakeview Jehovah's Witness	300 members	9605 Jamacha Blvd	6/30/1998	
I-7-11-11	Heartland Christian School	private high school (50 students)	3327 Kaura Drive	approved 3/5/99	
I-7-11-18	South Bay Builders	addition of garden room	8540 Lake Bluffs Drive	4/15/1991	
I-8-2-46	James A Church	74,400 sq ft storage facility + office apartment	north side of Jamacha Road east of Sweetwater Road	12/2/1982	built
I-9-1-4113	Sweetwater Auto Dismantling	existing facility modified uses (no new traffic)	6301 Quarry Road	9/10/1992	
I-17-411	Monteason Achievement Center	day care for 36 children and 4 teachers	10435 Campo Road	approved 10/9/97	
I-18-018	San Martin de Flores	116 units (adjacent to La Fresa Community Church)	John Kempton (between Jamacha Rd and Piedmont)	approved 4-29-99	
R/F-41-016	Rezone	existing rezone (no new traffic)	123 Worthington Street	12/8/2003	
S-03-013	Visionz Elementary School	WITHDRAWN	8783 Jamacha Road	4/30/2003	withdrawn 5/10/04
S-03-041	Ateli	11 unit apartments	8746 Iduca Street	5-22-2003	
S-03-018	Harrison	construct 2580 warehouse storage	9206 Hamess Street	5/15/2003	
S-03-0174	Charles Turner	commercial (1.77 acres)	Indus Way	10-17-2003	
S-03-0180	Yadollah	unknown	unknowna	4/23/2003	
S-03-0188	Jamacha Pointe Self Storage	self storage (unknown size)	9065 Memory Lane (Jamacha Blvd/Tulox Way)	12/11/2003	
S-04-0104	Associated Mix Concrete	WITHDRAWN	9148 Birch Street	withdrawn (8/30/04)	
S-04-0118	Cyclic Salvage	Cingular wireless unmanaged cellular	2837 Sweetwater Road	11/20/2004	
S-04-0130	Brown Tools	industrial storage building (0.8 acres)	729 Grand Avenue (Grand Jamacha)	\$ 25 2004	
S-04-0134	Spring Valley Auto	1984.5 sq ft auto repair	Grand and San Diego Avenue (NE corner)	6-24-2004	
S-04-0111	La Presa Plaza	wireless light pole	532 Grand Avenue	7/23/2004	
S-04-0165	Kovins Auto Body	additional building (no new traffic)	1077 Nonicito Way	10/12/2004	
S-04-0163	Lakeview Village Apis.	new garages for Lakeview village	3101 Sweetwater Springs Road	12/23/1998	
S-04-0111	La Presa Nextel	wireless facility	2780 Vida Orange Way	8/22/2000	
S-04-0124	Stronghold Steel	WITHDRAWN	1130 Sangamon Avenue	5/2/2003	withdrawn 5/16/03
S-04-0112	Sweetwater Energy LLC	add canopy to existing gas station	2615 Sweetwater Springs Road	6/27/2000	
S-04-0138	McDonald's	fast food restaurant	8370 Jamacha Blvd (Sweetwater Road/Gillespie)	9/13/1994	
S-04-0121	WITHDRAWN	WITHDRAWN	10499 Austin Drive	withdrawn 2/24/96	
S-04-0126	RSID Self Storage	8 mini warehouse storage buildings	approved 8/26/98		

B

S-08-018	Ric Ade	construct drive-thru window	661 Sweetwater Road	10/12/1998
S-08-019	DENIED	DENIED	DENIED	denied 12/15/98
S-08-016	Monte Vista Apartments	53 apartments	Janachka Road between Janachka Lane and Sweetwater Lane	11/11/1998
S-09-014	Papa's Pizza	add sign	2844 Rancho Drive	6/1/1999
S-09-015	Jan French	reconstruct fire destroyed building	9248 Olive Drive	7/24/1999
S-09-016	WITHDRAWN	WITHDRAWN	WITHDRAWN	withdrawn 12/8/00
SIP-08-0107	Cox/Sprint	wireless antennas	532 Grand Avenue	3/8/2000
SIP-08-0128	National Cat Kennel	redevelop existing use (no new traffic)	9031 Birch Street	approved 8/9/00
SIP-08-0134	Kenneth Scholtz Cars	1,790 sq ft sales plus used car lot	north side of Janachka Blvd (La Fresa Pecos)	approved 10/12/00
SIP-08-0172	Agha Dulce Apts	8 units SFTD!	2047 Sweetwater Road	approved 1/4/02
SIP-08-0108	Abow Used Car	office and used car dealership (1,200 sq ft repair)	852 Grand Avenue	approved 1/9/01
SIP-01-4123	Sprint/JM Carpet	wireless antennas	1019 Elkton Blvd	approved 6/6/01
SIP-01-4139	Auguri Auto Shop Sales	auto shop sales	711 Grand Avenue	6/18/2001
SIP-01-4141	Kenwood Apartments	11 unit apartments	south side Kentwood (Elkis Blawood)	approved 3/14/03
SIP-01-4151	Nextel	cell coman facility	2837 Sweetwater Road	4/22/2002
SIP-01-4152	Fran Sweetwater Duplex	2 duplexes (4 units?)	2051 Sweetwater Road	approved 8/18/01
SIP-01-4061	WITHDRAWN	WITHDRAWN	WITHDRAWN	withdrawn 9/6/02
SIP-01-4065	WITHDRAWN	WITHDRAWN	WITHDRAWN	withdrawn 5/24/02
SIP-01-4072	Casa de Oro Travel	1167 sq ft office, 10 employees (67 ADT)	NE corner Sweetwater Springs Willie Baker Way	10/15/2002
SIP-01-4122	ATT-Art's Lawmowers	unmanned telecom	9016 Roachate Drive	approved 5/31/02
SIP-01-4139	Cingular Wireless	wireless antennas	521 Sweetwater Road	approved 10/16/02
SIP-01-4142	Robinson Electric	10,000 sq ft warehouse	3871 Teva Street	8/1/2003
SIP-01-4146	Nail Zone Cingular	telecom facility	9348 Janachka Blvd (Sacramento/irand)	approved 10/25/02
SIP-01-4017	Giraud Auto Center	auto center (size unknown)	711 Grand Avenue	3/11/2003
SIP-01-4016	Connally Repair Garage	3000 sq ft repair garage at existing shop	9210 Olive Drive	5/17/1996
SIP-01-4011	WITHDRAWN	WITHDRAWN	WITHDRAWN	withdrawn 10/18/99
SIP-01-4139	Storage USA	monument sign	9150 Janachka Road	approved 9/1/29/98
SIP-01-4019	Adult Bookstore	monument sign	1157 Sweetwater Road	approved 1/20/00
TM-1-3518	Sweetwater Village East	136 du on 39.1 acres	west and north of Calle Los Arboles, north of Via del Parque	11/5/1976
TM-1-4570	Youtacy	extend Upland Street	1 Island Street (between Kenora and S Boula)	10/24/1995
TM-1-4917	WITHDRAWN	WITHDRAWN	WITHDRAWN	withdrawn
TM-1-5049	Baron Land	unknown	Kenwood between Ilex and Summerfield	2/16/1995
TM-1-5170	Industrial	1.4 industrial lots (min 0.5 acres)	southeast corner Janachka Blvd Sweetwater Springs	12/7/2010
TM-1-5180	AS Ranch	9 lots on 2.9 acres	Rancho Bernardo/Black Mountain	11/5/1999
TM-1-5221	Eneilez	6 units on 1.627 acres	8847 Innness Street	10/12/2004
TM-1-5245	Viejas Hills	26 sfds	north of Otto, east of Victoria	5/10/2001
TM-1-5232	Strickell Commercial	commercial (11.2 acres plus 0.75 acres of commercial)	1322 Sweetwater Springs	approved 7/18/02
TM-1-5241	Poinciana Mountain Top Units	part of Pointe Janachka Blvd	Pointe Parkway Janachka Blvd	11/5/2004
TM-1-5296	Poinciana San Diego	resort commercial, golf, and residential: 84 unit (replace Lakewood Phase II)	Pointe Parkway Janachka Blvd	10/22/2003
TM-1-5297	Poinciana Lakewood Phase I	33 unit condo (replaces existing complex)	Janachka, Sweetwater Springs	3/24/2003

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TM-5-209 (also N 010-01-023)	Hiquid Ranch	331 units on 176.8 acres	11-12-2002
TM-53-16	Montebello Estates	13 units	11-3-2003
TM-53-36	Ronaldia	20 units on 1.5 acres	10-25-2004
TM-5145 (also S-01-0178)	Pacific Homes	10 units on 0.85 acres	11-7-2003
TM-516 (also TM-4886)	Spring Valley Vista	35 units (350 AFT, 28 (8.20) am, 35 (15.10) pm)	8-7-2003
TM-5192	Etskhari	(Grand south of Hauress 2049 Sweetwater Road)	7-1-2004
TM-5197	SS-Standstone	30 unit condos on 1.07 acres (2 lots)	9-15-2004
TM-5400	Westline	16 condo units on 0.56 acres	6-15-2004
TM-19706	Mary Barber	maximum 7 lots on .5 acre minimum	6/11/1991
TM-2014	Weathersson	4 parcels	approved 4/29/98
TM-20183	Purata	unknown	approved 10/29/98
TM-20349	Bannian	3 units on 1 acre	approved 5/21/03
TM-20535	Takadashi	3 units on 1.16 acres	9/16/03 Kentwood Drive
TM-20570	WITHDRAWN	WITHDRAWN	withdrawn 3/21/01
TM-20589	Hugley	2 dwelling units	approved 9-25-01
TM-2m-53	DeBild	DENIED	denied 12/17/02
TM-20757	Kollus Ranch	5 units on 1.20 acres	6-12-2003
TM-20869	RSD Austin	2 lots industrial 21,800 sq ft	8-18-2004
TM-20880	Canwell	2 lots on 0.53 acres	10-4-2004
/ AP-01-0139	Naxell	panel antenna	approved 8/22/00
/ AP-01-0153	WITHDRAWN	WITHDRAWN	withdrawn 6/1/01
/ AP-01-062	WITHDRAWN	WITHDRAWN	withdrawn 3/12/02
/ AP-01-064	WITHDRAWN	WITHDRAWN	withdrawn 3/12/02
/ AP-01-108	WITHDRAWN	WITHDRAWN	withdrawn 3/12/02
/ AP-01-131	WITHDRAWN	WITHDRAWN	withdrawn 3/12/02
/ AP-01-141	ATT Wireless	9149 Rosedale Drive	1/27/2006
/ AP-01-152	Cabral Laper Wireless	3504 Glen Drive	withdrawn 6/21/02
/ AP-01-042	WITHDRAWN	WITHDRAWN	withdrawn 3/12/02
/ AP-01-050	WITHDRAWN	WITHDRAWN	withdrawn 3/12/02
/ AP-01-057	WITHDRAWN	WITHDRAWN	withdrawn 3/12/02
/ AP-01-066	WITHDRAWN	WITHDRAWN	withdrawn 4/24/02
/ AP-01-068	WITHDRAWN	WITHDRAWN	withdrawn 4/24/02
/ AP-01-070	WITHDRAWN	WITHDRAWN	withdrawn 4/24/02
/ AP-01-071	WITHDRAWN	WITHDRAWN	withdrawn 4/24/02
/ AP-01-072	WITHDRAWN	WITHDRAWN	withdrawn 4/24/02
/ AP-01-073	WITHDRAWN	WITHDRAWN	withdrawn 4/24/02
/ AP-01-074	WITHDRAWN	WITHDRAWN	withdrawn 4/24/02

B3

Z-AP-41-0175	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0177	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0178	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0179	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0180	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0181	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0182	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0183	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-0184	WITHDRAWN					withdrawn 4/24/02
Z-AP-41-01860	WITHDRAWN					withdrawn 3/12/02
Z-AP-41-111	WITHDRAWN	WITHDRAWN	WITHDRAWN	WITHDRAWN	WITHDRAWN	WITHDRAWN 6/12/02
Z-AP-412-037	Cingular Wireless	WITHDRAWN				WITHDRAWN 11/6/2002
Z-AP-412-079	Cingular Wireless antenna					WITHDRAWN 4/12/03
Z-AP-412-084	WITHDRAWN	WITHDRAWN				10/11/2004
Z-AP-414-017	Aceroado	2nd dwelling unit				1958 Avon Lane
Z-AP-418-0121	Laness Mobile Home	existing rezone (no new traffic)				9206 Ilammas Street
Z-AP-599-4405	bikewell	2nd dwelling unit				3074 Yhara Road
						Approved 3/26/99

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TAZ	County Processing #	Project Name	Size	Unit	SANDBAG TRIP GENERATION RATES						SANDBAG TRIP GENERATION CALCULATIONS						
					AM PEAK			PM PEAK			AM PEAK			PM PEAK			
					ABT	TOT	IN	OUT	ABT	TOT	IN	OUT	ADT	TOT	IN	OUT	
A	MUR-59-022	Exterior Car Wash	1,203 ksf	.50	0.07	0.50	0.50	0.08	0.50	0.50	0.50	0.50	60	4	2	1	2
A	STP-01-041	Kawwood Apartments	11 mdu	8	0.08	0.20	0.00	0.10	0.10	0.70	0.30	0.30	88	7	1	6	3
A	STP-02-042	Robison Warehouse	10 ksf	2	0.06	0.10	0.00	0.00	0.00	0.00	0.50	0.50	20	1	1	1	1
A	TM-5336	Ronata Multi-Family	20 mdu	4	0.08	0.20	0.00	0.10	0.10	0.70	0.30	0.30	160	13	3	10	5
A	TM-5337	SS-Multi-Family	30 mdu	8	0.08	0.20	0.00	0.10	0.10	0.70	0.30	0.30	240	19	4	15	7
A	TPA-20535	Takahashi Single Family	3 sfdu	12	0.08	0.20	0.00	0.10	0.10	0.70	0.30	0.30	36	3	1	2	1
A	TPM-20389	Ingley Single Family	2 sfdu	12	0.08	0.20	0.00	0.10	0.10	0.70	0.30	0.30	24	2	0	2	1
A	TPM-20757	Rollins Single Family	5 sfdu	12	0.08	0.20	0.00	0.10	0.10	0.70	0.30	0.30	60	5	1	4	2
A	TPM-20880	Cannell Single Family	2 sfdu	12	0.08	0.20	0.00	0.10	0.10	0.70	0.30	0.30	24	2	0	2	1
TOTAL TRAFFIC ZONE A													712	56	13	43	21

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TRAFFIC ANALYSIS ZONE B		SANDAG TRIP GENERATION CALCULATIONS																
TAZ	Project Name	Size	Unit	SANDAG TRIP GENERATION RATES			AM PEAK			PM PEAK			AM PEAK			PM PEAK		
				ADT	TOT	OUT	TOT	IN	OUT	ADT	TOT	IN	OUT	ADT	TOT	IN	OUT	
B	F-04-010	Group Care	15,930	sfdu	10	0.04	0.60	0.40	0.08	0.50	0.50	0.60	6	4	3	13	6	6
B	F-98-018	San Martin Multi Family	116	sfdu	8	0.08	0.20	0.00	0.10	0.70	0.30	0.28	74	15	59	93	65	28
B	S-03-041	Alef Multi Family	11	sfdu	9	0.08	0.20	0.00	0.10	0.70	0.30	0.88	7	1	6	9	6	3
B	S-98-056	Monte Vista Apartments	52	sfdu	8	0.08	0.20	0.00	0.10	0.70	0.30	416	33	7	27	42	29	13
B	STP-04-072	Aqua Dulce SFDU	8	sfdu	12	0.08	0.20	0.00	0.10	0.70	0.30	96	8	2	6	10	7	3
B	STP-01-052	Irau Sweetwater Duplex	4	sfdu	8	0.08	0.20	0.00	0.10	0.70	0.30	32	3	1	2	3	2	1
B	TH-5221	Benitez Single Family	6	sfdu	12	0.08	0.20	0.00	0.10	0.70	0.30	72	6	1	5	7	5	2
B	TM-5345	Pacific Homes	16	sfdu	8	0.08	0.20	0.00	0.10	0.70	0.30	128	10	2	8	13	9	4
B	TM-5392	Endakbari Single Family	10	sfdu	12	0.08	0.20	0.00	0.10	0.70	0.30	120	10	2	8	12	8	4
B	TM-5400	West One Multi-Family	16	sfdu	8	0.08	0.20	0.00	0.10	0.70	0.30	128	10	2	8	13	9	4
B	TPM-20349	Braunann Single Family	3	sfdu	12	0.08	0.20	0.00	0.10	0.70	0.30	36	3	1	1	1	1	0
B	ZAP-04-027	Alcevalo Single Family	1	sfdu	12	0.08	0.20	0.00	0.10	0.70	0.30	12	1	1	1	1	1	0
TOTAL TRAFFIC ZONE B							2216	171	37	134	218							

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TRAFFIC ANALYSIS ZONE C																
TAZ	County Processing #	Project Name	Size	Unit	AM PEAK			PM PEAK			SANDAG TRIP GENERATION RATES			SANDAG TRIP GENERATION CALCULATIONS		
					ADT	TOT	IN	OUT	TOT	IN	ADT	TOT	IN	OUT	PM PEAK	PM PEAK
C	S-04-030	Brown Industrial	0.8 acre	ft	100	0.12	0.80	0.70	0.12	0.20	0.10	160	19	13	4	19
C	S-04-034	Spring Valley Auto	19,845 sq ft	ft	20	0.08	0.70	0.30	0.11	0.40	0.04	397	21	10	4	17
C	STP-00-034	Kenneth Scholz Cars	1,790 sq ft	ft	50	0.05	0.70	0.30	0.08	0.40	0.03	90	4	3	1	4
C	STP-01-008	Above Used Car	1,200 sq ft	ft	50	0.05	0.70	0.30	0.08	0.40	0.03	60	3	2	1	3
C	STP-01-039	Audi Auto Shop	2,500 sq ft	ft	20	0.08	0.70	0.30	0.11	0.40	0.03	50	4	3	1	3
C	TM-5166	Spring Valley Visitors	35 sq ft	ft	12	0.08	0.20	0.80	0.10	0.70	0.30	420	34	7	27	42
TOTAL TRAFFIC ZONE C												1176	96	52	41	122

TRAFFIC ANALYSIS ZONE D																	
TAZ	County Processing #	Project Name	Size	Unit	AM PEAK			PM PEAK			SANDAG TRIP GENERATION RATES			SANDAG TRIP GENERATION CALCULATIONS			
					ADT	TOT	IN	OUT	TOT	IN	ADT	TOT	IN	OUT	PM PEAK	PM PEAK	
D	TM-5281	Pointe Mountaintop	mix	ft													
D	TM-5296	Pointe San Diego	mix	ft													
D	TM-5297	Pointe Lakeview Phase I	mix	ft													
TOTAL TRAFFIC ZONE D												27830	2801	1941	657	3001	1332

TRAFFIC ANALYSIS ZONE E																	
TAZ	County Processing #	Project Name	Size	Unit	AM PEAK			PM PEAK			SANDAG TRIP GENERATION RATES			SANDAG TRIP GENERATION CALCULATIONS			
					ADT	TOT	IN	OUT	TOT	IN	ADT	TOT	IN	OUT	PM PEAK	PM PEAK	
E	S-03-074	Charles Turner Commercial	1.77 acre	ft	400	0.03	0.60	0.40	0.09	0.50	0.50	708	21	13	64	32	
E	STP-01-072	Casa de Oro Travel Office	3,367 ksf	ft	20	0.14	0.90	0.10	0.13	0.70	0.02	67	9	1	9	2	
E	TM-5170	Industrial	28 acre	ft	50	0.11	0.90	0.10	0.12	0.70	0.02	2520	277	249	302	60	242
TOTAL TRAFFIC ZONE E												3295	308	271	37	315	94

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TRAFFIC ANALYSIS ZONE F										SANDAG TRIP GENERATION CALCULATIONS													
County Processing #	Project Name	Size	Unit	SANDAG TRIP GENERATION RATES			PM PEAK			AM PEAK			PM PEAK			AM PEAK			PM PEAK				
				ADT	TOT	IN	OUT	TOT	IN	OUT	ADT	TOT	IN	OUT	ADT	TOT	IN	OUT	ADT	TOT	IN	OUT	
F	TM-5252	2 acre	acres	400	0.03	0.60	0.40	0.69	0.50	0.50	800	24	14	10	72	36	36	36	11	11	11	11	
F	TM-5316	Montemar Estates	lots	13 lots	12	0.06	0.20	0.60	0.10	0.70	0.30	156	12	2	10	42	8	42	8	33	8	33	33
F	TPM-20869	RSD Austin Industrial	laf	21.8 laf	16	0.12	0.80	0.20	0.12	0.80	0.30	349	42	33	8	1	1	1	1	1	1	1	1
F	ZAP-99-005	Elwell	lots	1 lots	12	0.06	0.10	0.06	0.10	0.70	0.30	12	1	0	0	51	29	131	56	72	72	72	72
TOTAL TRAFFIC ZONE F											1317	79	51	29	131	56	72	72	72	72	72	72	

TRAFFIC ANALYSIS ZONE G										SANDAG TRIP GENERATION CALCULATIONS														
County Processing #	Project Name	Size	Unit	SANDAG TRIP GENERATION RATES			PM PEAK			AM PEAK			PM PEAK			AM PEAK			PM PEAK					
				ADT	TOT	IN	OUT	TOT	IN	OUT	ADT	TOT	IN	OUT	ADT	TOT	IN	OUT	ADT	TOT	IN	OUT		
G	TM-5299	Highland Ranch	lots	231 lots	12	0.08	0.20	0.80	0.10	0.70	0.30	2772	223	44	177	277	194	194	194	194	194	194	194	194
TOTAL TRAFFIC ZONE G											2772	223	44	177	277	194	194	194	194	194	194	194	194	

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CUMULATIVE TRAFFIC
JAMACHA BLVD/SWEETWATER SPRINGS

Intersection:
 Day/Date:

Jamacha/Sweetwater Spg
 October 2004

Jurisdiction: County
 By: Hartshorn

	Sweetwater Springs			Jamacha Blvd								
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Traffic	11	20	10	89	39	452	611	369	34	24	508	109
Montemar Estates				1		1	0		0		0	0
Existing+Project AM	11	20	10	90	39	453	611	369	34	24	508	109
Existing Traffic	43	86	36	132	20	588	381	509	16	10	484	95
Montemar Estates				1		1	1		0		0	1
Existing+Project PM	43	86	36	133	20	589	382	509	16	10	484	96

CUMULATIVE TRAFFIC	Sweetwater Springs			Jamacha Blvd								
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing	11	20	10	89	39	452	611	369	34	24	508	109
Growth (if applicable)	12	21	11	94	41	479	648	391	36	25	538	116
Cumulative	15	11	11	18	81	832	376	107	108	81	206	10
Growth+Cumulative	27	32	22	112	123	1311	1039	498	144	107	744	131
Montemar Estates	0	0	0	1	0	1	0	0	0	0	0	0
(WITH PROJECT AM)	27	32	22	113	123	1312	1039	498	144	107	744	131
Existing	43	86	36	132	20	588	381	509	16	10	484	95
Growth (if applicable)	46	91	38	140	21	623	404	540	17	11	513	101
Cumulative	112	84	84	21	28	554	782	194	38	28	148	26
Growth+Cumulative	158	175	122	161	49	1177	1186	733	55	39	661	127
Montemar Estates	0	0	0	1	0	1	1	0	0	0	0	1
(WITH PROJECT PM)	158	175	122	162	49	1178	1187	733	55	39	661	128

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**CUMULATIVE TRAFFIC
CAMPO ROAD/SR-94 WESTBOUND**

Intersection:
Day/Date:

Campo/SR-94 West
October 2004

Jurisdiction: County
By: Hartshorn

	Campo Road						SR-94 Westbound					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Traffic	672	398	43	1	234	86	0	0	0	165	58	216
Montemar Estates	2				0					0		
Existing+Project AM	674	398	43	1	234	86	0	0	0	165	58	216
Existing Traffic	533	247	86	6	448	97	0	0	0	219	38	204
Montemar Estates	1				1					1		
Existing+Project PM	534	247	86	6	449	97	0	0	0	220	38	204

CUMULATIVE TRAFFIC	Campo Road						SR-94 Westbound					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing	672	398	43	1	234	86	0	0	0	165	58	216
Growth (if applicable)	712	422	46	1	248	91	0	0	0	175	61	229
Cumulative	198	86			194					153		
Growth+Cumulative	910	508	46	1	442	91	0	0	0	328	61	229
Montemar Estates	2	0	0	0	0	0	0	0	0	0	0	0
(WITH PROJECT AM)	912	508	46	1	442	91	0	0	0	328	61	229
Existing	533	247	86	6	448	97	0	0	0	219	38	204
Growth (if applicable)	565	262	91	6	475	103	0	0	0	232	40	216
Cumulative	360	177			123					92		
Growth+Cumulative	925	439	91	6	598	103	0	0	0	324	40	216
Montemar Estates	1	0	0	0	1	0	0	0	0	1	0	0
(WITH PROJECT PM)	926	439	91	6	599	103	0	0	0	325	40	216

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CUMULATIVE TRAFFIC
SWEETWATER SPRINGS/SR-94 EB RAMPS

Intersection:
 Day/Date:

Sweetwater Springs/SR-94 EB Jurisdiction: County
 October 2004 By: Hartshorn

	Sweetwater Springs						SR-94 Eastbound					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Traffic	0	982	223	94	312	0	90	1	518	0	0	0
Montemar Estates		2	1		1				1			
Existing+Project AM	0	984	224	94	313	0	90	1	519	0	0	0
Existing Traffic	0	709	236	212	468	0	141	3	850	0	0	0
Montemar Estates		1	1		2				2			
Existing+Project PM	0	710	237	212	470	0	141	3	852	0	0	0

CUMULATIVE TRAFFIC	Sweetwater Springs						SR-94 Eastbound					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing	0	982	223	94	312	0	90	1	518	0	0	0
Growth (if applicable)	0	1041	236	100	331	0	95	1	549	0	0	0
Cumulative		281	68		350				369			
Growth+Cumulative	0	1322	304	100	681	0	95	1	918	0	0	0
Montemar Estates	0	2	1	0	1	0	0	0	1	0	0	0
(WITH PROJECT AM)	0	1324	305	100	682	0	95	1	919	0	0	0
Existing	0	709	236	212	468	0	141	3	850	0	0	0
Growth (if applicable)	0	752	250	225	496	0	149	3	901	0	0	0
Cumulative		533	155		228				279			
Growth+Cumulative	0	1285	405	225	724	0	149	3	1180	0	0	0
Montemar Estates	0	1	1	0	2	0	0	0	2	0	0	0
(WITH PROJECT PM)	0	1286	406	225	726	0	149	3	1182	0	0	0

B11

**CUMULATIVE TRAFFIC
SWEETWATER SPRINGS/AUSTIN**

Intersection: Sweetwater Springs/Austin Jurisdiction: County
 Day/Date: October 2004 By: Hartshorn

	Sweetwater Springs						Austin					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Traffic	82	627	63	135	427	176	235	63	120	25	55	165
Montemar Estates	1						2	3	0	2		0
Existing+Project AM	83	627	63	135	427	178	238	63	122	25	55	165
Existing Traffic	108	403	35	149	548	359	253	81	117	84	61	192
Montemar Estates	2						4	2	0	2		1
Existing+Project PM	110	403	35	149	548	363	255	81	119	84	62	192

CUMULATIVE TRAFFIC	Sweetwater Springs						Austin					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing	82	627	63	135	427	176	235	63	120	25	55	165
Growth (if applicable)	87	665	67	143	453	187	249	67	127	27	58	175
Cumulative	44	331	43		772	44	61	6	61	88	3	
Growth+Cumulative	131	996	110	143	1224	230	310	73	188	115	61	175
Montemar Estates	1	0	0	0	0	2	3	0	2	0	0	0
(WITH PROJECT AM)	132	996	110	143	1224	232	313	73	190	115	61	175
Existing	108	403	35	149	548	359	253	81	117	84	61	192
Growth (if applicable)	114	427	37	158	581	381	268	86	124	89	65	204
Cumulative	85	718	88		462	85	60	3	60	43	8	
Growth+Cumulative	200	1146	125	158	1043	466	328	89	184	132	73	204
Montemar Estates	2	0	0	0	0	4	2	0	2	0	1	0
(WITH PROJECT PM)	202	1146	125	158	1043	470	330	89	186	132	74	204

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CUMULATIVE TRAFFIC
BARCELONA/AUSTIN

Intersection:
Day/Date:

Barcelona/Austin
October 2004

Jurisdiction: County
By: Hartshorn

	Barcelona						Austin					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Traffic	6	43	20	35	9	11	16	94	1	10	91	44
Montemar Estates						1	1	5				3
Existing+Project AM	6	43	20	35	9	12	17	99	1	10	94	44
Existing Traffic	1	37	25	78	28	45	36	87	7	43	89	93
Montemar Estates						2	1	3				7
Existing+Project PM	1	37	25	78	28	47	37	90	7	43	96	93

	Barcelona						Austin					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing	6	43	20	35	9	11	16	94	1	10	91	44
Growth (if applicable)	6	46	21	37	10	12	17	100	1	11	96	47
Cumulative		18	101	5	8					44		3
Growth+Cumulative	6	64	122	42	18	12	17	100	1	55	96	50
Montemar Estates	0	0	0	0	0	1	1	5	0	0	3	0
(WITH PROJECT AM)	6	64	122	42	18	13	18	105	1	55	99	50
Existing	1	37	25	78	28	45	36	87	7	43	89	93
Growth (if applicable)	1	39	27	83	30	48	38	92	7	46	94	99
Cumulative		10	54	6	23					128		7
Growth+Cumulative	1	49	81	88	53	48	38	92	7	174	94	106
Montemar Estates	0	0	0	0	0	2	1	3	0	0	7	0
(WITH PROJECT PM)	1	49	81	88	53	50	39	95	7	174	101	106

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**CUMULATIVE TRAFFIC
SWEETWATER SPRINGS/DEL RIO**

Intersection:
Day/Date:

Sweetwater Springs/Del Rio Jurisdiction: County
October 2004 By: Hartshom

	Sweetwater Springs						Del Rio					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Traffic	5	1115	12	7	804	33	38	0	7	26	1	25
Montemar Estates		3			1					0		
Existing+Project AM	5	1118	12	7	805	33	38	0	7	26	1	25
Existing Traffic	7	914	12	11	1181	114	24	1	16	19	4	14
Montemar Estates		2			4					1		
Existing+Project PM	7	916	12	11	1185	114	24	1	16	20	4	14

CUMULATIVE TRAFFIC	Sweetwater Springs						Del Rio					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing	5	1115	12	7	804	33	38	0	7	26	1	25
Growth (if applicable)	5	1182	13	7	852	35	40	0	7	28	1	27
Cumulative		349	43		718					97		
Growth+Cumulative	5	1531	56	7	1571	35	40	0	7	125	1	27
Montemar Estates	0	3	0	0	1	0	0	0	0	0	0	0
(WITH PROJECT AM)	5	1534	56	7	1572	35	40	0	7	125	1	27
Existing	7	914	12	11	1181	114	24	1	16	19	4	14
Growth (if applicable)	7	969	13	12	1252	121	25	1	17	20	4	15
Cumulative		690	88		507					62		
Growth+Cumulative	7	1659	101	12	1759	121	25	1	17	82	4	15
Montemar Estates	0	2	0	0	4	0	0	0	0	1	0	0
(WITH PROJECT PM)	7	1661	101	12	1763	121	25	1	17	83	4	15

B14

**CUMULATIVE TRAFFIC
AQUA DULCE/SR-94 OFF**

Intersection:
Day/Date:

Aqua Dulce/SR-94 Off
October 2004

Jurisdiction: County
By: Hartshorn

	Aqua Dulce			SR-94 Off								
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing Traffic	361	0	3	0	0	0	1	50	0	0	98	0
Montemar Estates	0											
Existing+Project AM	361	0	3	0	0	0	1	50	0	0	98	0
Existing Traffic	376	0	1	0	0	0	0	95	0	0	81	0
Montemar Estates	1											
Existing+Project PM	377	0	1	0	0	0	0	95	0	0	81	0

CUMULATIVE TRAFFIC	Aqua Dulce			SR-94 Off								
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
Existing	361	0	3	0	0	0	1	50	0	0	98	0
Growth (if applicable)	383	0	3	0	0	0	1	53	0	0	104	0
Cumulative	153											
Growth+Cumulative	535	0	3	0	0	0	1	53	0	0	104	0
Montemar Estates	0	0	0	0	0	0	0	0	0	0	0	0
(WITH PROJECT AM)	535	0	3	0	0	0	1	53	0	0	104	0
Existing	376	0	1	0	0	0	0	95	0	0	81	0
Growth (if applicable)	399	0	1	0	0	0	0	101	0	0	86	0
Cumulative	102											
Growth+Cumulative	501	0	1	0	0	0	0	101	0	0	86	0
Montemar Estates	1	0	0	0	0	0	0	0	0	0	0	0
(WITH PROJECT PM)	502	0	1	0	0	0	0	101	0	0	86	0

B15

APPENDIX C
HCS Worksheets

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 /W St: Jamacha Blvd

Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
GConfig	L	T	R	L	T	R	LTR			LT		
Volume	611	369	34	124	508	109	11	20	10	189	39	452
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0		
TOR Vol	0			0			0			0		

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
LB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
B Right	A				WB Right			
Green	22.0	32.0			21.0			
Yellow	3.0	3.0			3.0			
All Red	2.0	2.0			2.0			
Cycle Length: 90.0 secs								

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay LOS	Delay LOS
Eastbound								
T	856	3502	0.79	0.24	37.0	D		
T	1284	3610	0.32	0.36	21.2	C	30.7	C
R	574	1615	0.07	0.36	19.2	B		
Westbound								
T	441	1805	0.06	0.24	26.1	C		
T	1284	3610	0.44	0.36	22.4	C	22.2	C
R	574	1615	0.21	0.36	20.4	C		
Northbound								
T,TR	395	1693	0.11	0.23	27.3	C	27.3	C
Southbound								
T	339	1452	0.42	0.23	30.2	C	18.5	B
T	861	1615	0.58	0.53	15.2	B		
Intersection Delay = 25.1 (sec/veh)					Intersection LOS = C			

C|

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: Jamacha Blvd
 Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
LGConfig	L	T	R	L	T	R	LTR			LT R		
Volume	611	369	34	24	508	109	11	20	10	90	39	453
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0 12.0		
RTOR Vol			0		0			0			0	

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right	A				WB Right			
Green	22.0	32.0				21.0		
Yellow	3.0	3.0				3.0		
All Red	2.0	2.0				2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay LOS	Delay LOS		
Eastbound								
L	856	3502	0.79	0.24	37.0	D		
T	1284	3610	0.32	0.36	21.2	C	30.7	C
R	574	1615	0.07	0.36	19.2	B		
Westbound								
L	441	1805	0.06	0.24	26.1	C		
T	1284	3610	0.44	0.36	22.4	C	22.2	C
R	574	1615	0.21	0.36	20.4	C		
Northbound								
LTR	395	1693	0.11	0.23	27.3	C	27.3	C
Southbound								
LT	339	1451	0.42	0.23	30.2	C	18.6	B
R	861	1615	0.58	0.53	15.3	B		
Intersection Delay = 25.1 (sec/veh)					Intersection LOS = C			

C2

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 W St: Jamacha Blvd

Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
Config	L	T	R	L	T	R	LTR			LT R		
Volume	1039	498	144	107	744	131	27	32	22	112	123	1311
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0 12.0		
COR Vol	0			0			0			0		

Duration 0.25 Area Type: All other areas
 Signal Operations

Lane Combination		1	2	3	4	5	6	7	8
-3	Left	A				NB Left	A		
	Thru		A			Thru	A		
	Right		A			Right	A		
	Peds					Peds			
WB	Left	A				SB Left	A		
	Thru		A			Thru	A		
	Right		A			Right	A		
	Peds					Peds			
NB	Right					EB Right			
-3	Right	A				WB Right			
Green		30.0	24.0				21.0		
Yellow		3.0	3.0				3.0		
All Red		2.0	2.0				2.0		
Cycle Length: 90.0 secs									

Intersection Performance Summary

Appr/ Lane cap	Lane Group	Adj Sat Capacity	Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							
F		1167	3502	0.99	0.33	53.4	D
T		963	3610	0.57	0.27	29.4	C
R		431	1615	0.37	0.27	27.4	C
Westbound							
F		602	1805	0.20	0.33	21.6	C
T		963	3610	0.86	0.27	39.3	D
R		431	1615	0.34	0.27	27.1	C
Northbound							
LTR		274	1174	0.33	0.23	29.4	C
Southbound							
F		364	1561	0.72	0.23	38.4	D
		1005	1615	1.45	0.62	225.0	F
Intersection Delay = 96.9 (sec/veh) Intersection LOS = F							

C3

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: Jamacha Blvd
 Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
LGConfig	L	T	R	L	T	R	LTR			LT		
Volume	1039	498	144	107	744	131	27	32	22	113	123	1312
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0		
RTOR Vol		0		0			0			0		

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right	A				WB Right			
Green	30.0	24.0			21.0			
Yellow	3.0	3.0			3.0			
All Red	2.0	2.0			2.0			

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay	LOS
Eastbound								
L		1167	3502	0.99	0.33	53.4	D	
T		963	3610	0.57	0.27	29.4	C	44.1 D
R		431	1615	0.37	0.27	27.4	C	
Westbound								
L		602	1805	0.20	0.33	21.6	C	
T		963	3610	0.86	0.27	39.3	D	35.7 D
R		431	1615	0.34	0.27	27.1	C	
Northbound								
LTR		272	1167	0.33	0.23	29.4	C	29.4 C
Southbound								
LT		364	1559	0.72	0.23	38.7	D	196.9 F
R		1005	1615	1.45	0.62	225.4	F	
Intersection Delay = 97.0 (sec/veh) Intersection LOS = F								

C4

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 - Montemar
 /W St: Jamacha Blvd

Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
GConfig	L	T	R	L	T	R	LTR			LT		
Volume	381	509	16	10	484	95	43	86	36	132	20	588
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0		
TOR Vol			0		0			0			0	

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
B Right	A				WB Right			
Green	30.0	24.0				21.0		
Yellow	3.0	3.0				3.0		
All Red	2.0	2.0				2.0		
Cycle Length: 90.0 secs								

Intersection Performance Summary

Appr/ Lane	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							
T		1167	3502	0.36	0.33	22.9	C
T		963	3610	0.59	0.27	29.6	C
R		431	1615	0.04	0.27	24.5	C
Westbound							
T		602	1805	0.02	0.33	20.1	C
T		963	3610	0.56	0.27	29.2	C
T		431	1615	0.25	0.27	26.2	C
Northbound							
LTR		322	1378	0.57	0.23	33.0	C
Southbound							
T		251	1077	0.67	0.23	38.3	D
T		1005	1615	0.65	0.62	12.3	B
Intersection Delay = 24.8 (sec/veh) Intersection LOS = C							

CS

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 - Montemar
 E/W St: Jamacha Blvd

Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
LGConfig	L	T	R	L	T	R	LTR			LT	T	R
Volume	382	509	16	10	484	96	43	86	36	133	20	589
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0
RTOR Vol	0		0		0		0			0		

Duration	0.25	Area Type: All other areas							
Signal Operations									
Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB	Left	A		
Thru		A				Thru	A		
Right		A				Right	A		
Peds						Peds			
WB Left	A				SB	Left	A		
Thru		A				Thru	A		
Right		A				Right	A		
Peds						Peds			
NB Right					EB	Right			
SB Right	A				WB	Right			
Green	30.0	24.0				21.0			
Yellow	3.0	3.0				3.0			
All Red	2.0	2.0				2.0			
Cycle Length: 90.0 secs									

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	1167	3502	0.36	0.33	22.9	C		
T	963	3610	0.59	0.27	29.6	C	26.7	C
R	431	1615	0.04	0.27	24.5	C		
Westbound								
L	602	1805	0.02	0.33	20.1	C		
T	963	3610	0.56	0.27	29.2	C	28.5	C
R	431	1615	0.25	0.27	26.2	C		
Northbound								
LTR	321	1374	0.57	0.23	33.0	C	33.0	C
Southbound								
LT	251	1077	0.68	0.23	38.5	D	17.7	B
R	1005	1615	0.65	0.62	12.3	B		
Intersection Delay = 24.8 (sec/veh)					Intersection LOS = C			

(C)

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 W St: Jamacha Blvd

Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
GConfig	L	T	R	L	T	R	LTR			LT R		
Volume	1186	733	55	39	661	127	158	175	122	161	49	1177
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0 12.0		
TOR Vol			0		0			0			0	

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination			1	2	3	4	5	6	7	8
E/B Left	A						NB Left	A		
Thru		A					Thru	A		
Right		A					Right	A		
Peds							Peds			
WB Left	A						SB Left	A		
Thru		A					Thru	A		
Right		A					Right	A		
Peds							Peds			
NB Right							EB Right			
B Right	A						WB Right			
Green		30.0	24.0					21.0		
Yellow		3.0	3.0					3.0		
Red		2.0	2.0					2.0		
Cycle Length: 90.0 secs										

Intersection Performance Summary

Approach	Lane Group	Lane Group	Adj Sat Ratios		Delay LOS		Delay LOS	
			Capacity	Flow Rate (s)	v/c	g/C	Delay LOS	Delay LOS
Eastbound								
T	1167	3502	1.13	0.33	99.5	F		
T	963	3610	0.85	0.27	38.3	D	74.7	E
T	431	1615	0.14	0.27	25.3	C		
Westbound								
T	602	1805	0.07	0.33	20.5	C		
T	963	3610	0.76	0.27	34.0	C	32.3	C
T	431	1615	0.33	0.27	27.0	C		
Northbound								
T	189	809	2.68	0.23	804.2	F	804.2	F
Southbound								
T	193	826	1.21	0.23	166.2	F	160.9	F
T	1005	1615	1.30	0.62	160.0	F		
Intersection Delay = 164.5 (sec/veh) Intersection LOS = F								

C7

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: Jamacha Blvd

Inter.: Jamacha/Sweetwater Sprgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	1	2	1	0	1	0	0	1	1
LGConfig	L	T	R	L	T	R	LTR			LT		R
Volume	1187	733	55	39	661	128	158	175	122	162	49	1178
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0			12.0	12.0	
RTOR Vol	0			0			0			0		

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	A				NB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
WB	Left	A				SB	Left	A	
	Thru		A				Thru	A	
	Right		A				Right	A	
	Peds						Peds		
NB	Right					EB	Right		
SB	Right	A				WB	Right		
Green		30.0	24.0				21.0		
Yellow		3.0	3.0				3.0		
All Red		2.0	2.0				2.0		
							Cycle Length: 90.0	secs	

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay	LOS
Eastbound								
L		1167	3502	1.13	0.33	99.8	F	
T		963	3610	0.85	0.27	38.3	D	74.9 E
R		431	1615	0.14	0.27	25.3	C	
Westbound								
L		602	1805	0.07	0.33	20.5	C	
T		963	3610	0.76	0.27	34.0	C	32.3 C
R		431	1615	0.33	0.27	27.0	C	
Northbound								
LTR		188	805	2.69	0.23	810.6	F	810.6 F
Southbound								
LT		193	825	1.21	0.23	168.2	F	161.6 F
R		1005	1615	1.30	0.62	160.4	F	
Intersection Delay = 165.4 (sec/veh) Intersection LOS = F								

C8

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 /W St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
GConfig	L	LT	R	L	T	R	L	TR		L	TR	
Volume	235	63	120	125	55	165	182	627	63	135	427	176
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
TOR Vol		0		0			0		0		0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination				1	2	3	4	5	6	7	8
EB	Left	A					NB	Left	A		
	Thru	A						Thru	A		
	Right	A						Right	A		
	Peds							Peds			
WB	Left		A				SB	Left	A		
	Thru		A					Thru	A		
	Right		A					Right	A		
	Peds							Peds			
NB	Right						EB	Right			
B	Right						WB	Right	A		
reen		15.0	12.0						12.0	31.0	
Yellow		3.0	3.0						3.0	3.0	
ll Red		2.0	2.0						2.0	2.0	
										Cycle Length: 90.0	secs

Intersection Performance Summary

Appr/ Lane	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							
L	301,	1805	0.54	0.17	36.4	D	
LT	308	1847	0.54	0.17	36.3	D	36.1 D
R	269	1615	0.49	0.17	35.5	D	
Westbound							
L	241	1805	0.12	0.13	34.5	C	
T	253	1900	0.24	0.13	35.4	D	27.5 C
T	520	1615	0.35	0.32	23.7	C	
Orthbound							
L	241	1805	0.38	0.13	36.6	D	
R	1227	3561	0.63	0.34	25.7	C	26.8 C
Southbound							
L	241	1805	0.62	0.13	41.8	D	
R	1189	3452	0.56	0.34	24.6	C	27.8 C

Intersection Delay = 29.0 (sec/veh) Intersection LOS = C

C9

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
LGConfig	L	LT	R	L	T	R	L	TR		L	TR	
Volume	238	63	122	25	55	165	83	627	63	135	427	178
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol		0			0			0			0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left		A			SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	15.0	12.0				12.0	31.0	
Yellow	3.0	3.0				3.0	3.0	
All Red	2.0	2.0				2.0	2.0	

Cycle Length: 90.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS
Eastbound								
L	301	1805	0.55	0.17	36.6	D		
LT	308	1846	0.55	0.17	36.4	D	36.3	D
R	269	1615	0.51	0.17	35.7	D		
Westbound								
L	241	1805	0.12	0.13	34.5	C		
T	253	1900	0.24	0.13	35.4	D	27.5	C
R	520	1615	0.35	0.32	23.7	C		
Northbound								
L	241	1805	0.38	0.13	36.6	D		
TR	1227	3561	0.63	0.34	25.7	C	26.8	C
Southbound								
L	241	1805	0.62	0.13	41.8	D		
TR	1188	3450	0.57	0.34	24.7	C	27.8	C

Intersection Delay = 29.1 (sec/veh) Intersection LOS = C

C(0)

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 SW St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
GConfig	L	LT	R	L	T	R	L	TR		L	TR	
Volume	310	73	188	115	61	175	131	996	110	143	1224	230
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
ATOR Vol		0		0			0		0		0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB	Left	A	
Thru	A					Thru	A	
Right	A					Right	A	
Peds						Peds		
WB Left		A			SB	Left	A	
Thru		A				Thru	A	
Right		A				Right	A	
Peds						Peds		
NB Right					EB	Right		
B Right					WB	Right	A	
Green	11.0	8.0				9.0	42.0	
Yellow	3.0	3.0				3.0	3.0	
All Red	2.0	2.0				2.0	2.0	
						Cycle Length:	90.0	secs

Intersection Performance Summary

Approach	Lane Group	Lane Capacity	Adj Sat (s)	Ratios		Delay LOS	Delay LOS
				v/c	g/C		
Eastbound							
L	221.	1805	0.98	0.12	94.6	F	
LT	225	1844	0.92	0.12	78.9	E	98.0 F
T	197	1615	1.06	0.12	120.7	F	
Westbound							
L	160	1805	0.80	0.09	64.6	E	
T	169	1900	0.40	0.09	40.3	D	43.2 D
	395	1615	0.49	0.24	30.2	C	
Northbound							
L	181	1805	0.81	0.10	62.6	E	
R	1659	3556	0.74	0.47	21.4	C	25.8 C
Southbound							
L	181	1805	0.88	0.10	75.3	E	
R	1645	3524	0.98	0.47	41.7	D	44.7 D

Intersection Delay = 46.4 (sec/veh) Intersection LOS = D

CII

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
LGConfig	.L	LT	R	L	T	R	L	TR		L	TR	
Volume	313	73	190	115	61	175	132	996	110	143	1224	232
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol		0		0			0			0		

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left		A			SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right	A		
Green	11.0	8.0				9.0	42.0	
Yellow	3.0	3.0				3.0	3.0	
All Red	2.0	2.0				2.0	2.0	
					Cycle Length:	90.0	secs	

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							
L	221	1805	0.99	0.12	97.3	F	
LT	225	1843	0.93	0.12	81.0	F	100.7 F
R	197	1615	1.07	0.12	123.8	F	
Westbound							
L	160	1805	0.80	0.09	64.6	E	
T	169	1900	0.40	0.09	40.3	D	43.2 D
R	395	1615	0.49	0.24	30.2	C	
Northbound							
L	181	1805	0.81	0.10	63.4	E	
TR	1659	3556	0.74	0.47	21.4	C	25.9 C
Southbound							
L	181	1805	0.88	0.10	75.3	E	
TR	1645	3524	0.98	0.47	42.0	D	45.0 D

Intersection Delay = 47.1 (sec/veh) Intersection LOS = D

C12

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 W St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Config	L	LT	R	L	T	R	L	TR		L	TR	
Volume	253	81	117	84	61	192	108	403	35	149	548	359
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
TOR Vol		0		0			0			0		

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left		A			SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
3 Right					WB Right	A		
Green		13.0	8.0			12.0	37.0	
Yellow		3.0	3.0			3.0	3.0	
All Red		2.0	2.0			2.0	2.0	
					Cycle Length:	90.0	secs	

Intersection Performance Summary

Appr/ Lane	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							
L	261	1805	0.68	0.14	43.4	D	
LT	267	1850	0.73	0.14	46.3	D	43.4 D
T	233	1615	0.56	0.14	38.8	D	
Westbound							
L	160	1805	0.58	0.09	44.7	D	
T	169	1900	0.40	0.09	40.3	D	34.3 C
R	449	1615	0.47	0.28	27.8	C	
Northbound							
L	241	1805	0.50	0.13	37.8	D	
R	1466	3567	0.33	0.41	18.2	B	22.1 C
Southbound							
L	241	1805	0.69	0.13	45.3	D	
R	1396	3396	0.72	0.41	24.1	C	27.1 C

Intersection Delay = 30.0 (sec/veh) Intersection LOS = C

C13

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
LGConfig	L	LT	R	L	T	R	L	TR		L	TR	
Volume	255	81	119	84	62	192	110	403	35	149	548	363
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol		0			0			0			0	

Duration	Area Type: All other areas							
	Signal Operations							
Phase Combination	1	2	3	4		5	6	7
EB Left	A				NB	Left	A	
Thru	A					Thru		A
Right	A					Right		A
Peds						Peds		
WB Left		A			SB	Left	A	
Thru		A				Thru		A
Right		A				Right		A
Peds						Peds		
NB Right					EB	Right		
SB Right					WB	Right	A	
Green	13.0	8.0					12.0	37.0
Yellow	3.0	3.0					3.0	3.0
All Red	2.0	2.0					2.0	2.0
							Cycle Length: 90.0 secs	

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							
L	261	1805	0.68	0.14	43.6	D	
LT	267	1850	0.73	0.14	46.6	D	43.6 D
R	233	1615	0.57	0.14	39.1	D	
Westbound							
L	160	1805	0.58	0.09	44.7	D	
T	169	1900	0.41	0.09	40.4	D	34.3 C
R	449	1615	0.47	0.28	27.8	C	
Northbound							
L	241	1805	0.51	0.13	38.0	D	
TR	1466	3567	0.33	0.41	18.2	B	22.2 C
Southbound							
L	241	1805	0.69	0.13	45.3	D	
TR	1395	3394	0.73	0.41	24.2	C	27.1 C

Intersection Delay = 30.1 (sec/veh) Intersection LOS = C

C14

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 /W St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
GConfig	L	LT	R	L	T	R	L	TR		L	TR	
Volume	328	89	184	132	73	204	200	1146	125	158	1043	466
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
TOR Vol			18		20			12			50	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left		A			SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NB Right					EB Right			
B Right					WB Right	A		
Green		12.0	6.0			10.0	46.0	
Yellow		3.0	3.0			3.0	3.0	
All Red		2.0	2.0			2.0	2.0	
					Cycle Length: 94.0 secs			

Intersection Performance Summary

Appr/ Lane	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							
L	230	1805	1.00	0.13	99.0	F	
LT	236	1847	0.99	0.13	97.0	F	91.6 F
R	206	1615	0.89	0.13	75.5	E	
Westbound							
T	115	1805	1.28	0.06	220.3	F	
T	121	1900	0.67	0.06	56.4	E	101.8 F
	361	1615	0.57	0.22	34.5	C	
Northbound							
L	192	1805	1.16	0.11	155.3	F	
TR	1743	3561	0.80	0.49	23.0	C	41.1 D
Southbound							
L	192	1805	0.92	0.11	83.8	F	
R	1691	3456	0.96	0.49	36.5	D	41.1 D

Intersection Delay = 54.2 (sec/veh) Intersection LOS = D

CIS

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: Austin Drive

Inter.: Austin/Sweetwater Spgs
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	0	1	2	0
LGConfig	.L	LT	R	L	T	R	L	TR		L	TR	
Volume	330	89	186	132	74	204	202	1146	125	158	1043	470
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			18			20			12			50

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB	Left	A	
Thru	A				Thru		A	
Right	A				Right		A	
Peds					Peds			
WB Left		A			SB	Left	A	
Thru		A			Thru		A	
Right		A			Right		A	
Peds					Peds			
NB Right					EB	Right		
SB Right					WB	Right	A	
Green	12.0	6.0			10.0	44.0		
Yellow	3.0	3.0			3.0	3.0		
All Red	2.0	2.0			2.0	2.0		
					Cycle Length:	92.0	secs	

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
			v/c	g/C		Delay LOS	Delay LOS
Eastbound							
L	235	1805	0.98	0.13	93.6	F	
LT	241	1847	0.98	0.13	90.7	F	86.5 F
R	211	1615	0.89	0.13	72.5	E	
Westbound							
L	118	1805	1.25	0.07	206.0	F	
T	124	1900	0.66	0.07	54.4	D	95.9 F
R	369	1615	0.55	0.23	33.2	C	
Northbound							
L	196	1805	1.14	0.11	149.0	F	
TR	1703	3561	0.82	0.48	24.0	C	41.2 D
Southbound							
L	196	1805	0.90	0.11	77.9	E	
TR	1652	3454	0.98	0.48	42.1	D	45.6 D

Intersection Delay = 54.8 (sec/veh) Intersection LOS = D

C16

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 /W St: Del Rio

Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
c. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
GConfig		LTR			LTR			L TR			L T R	
Volume	38	0	7	26	1	25	5	1115	12	7	804	33
Lane Width		12.0			12.0			12.0 12.0			12.0 12.0 12.0	
TOR Vol		0			0			0			0	

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
"B Right					EB Right			
B Right					WB Right			
Green	15.0				15.0	45.0		
Yellow	3.0				3.0	3.0		
Red	2.0				2.0	2.0		
					Cycle Length: 90.0 secs			

Intersection Performance Summary

ppr/ Lane	Lane Group	Adj Sat	Flow Rate	Ratios	Lane Group	Approach	
ane	Group	Capacity	(s)	v/c	g/C	Delay LOS	Delay LOS
<hr/>							

Eastbound

LTR	230	1379	0.22	0.17	32.9	C	32.9	C
-----	-----	------	------	------	------	---	------	---

Westbound

LTR	250	1502	0.23	0.17	33.0	C	33.0	C
-----	-----	------	------	------	------	---	------	---

Northbound

L	301	1805	0.02	0.17	31.4	C		
R	1802	3604	0.69	0.50	18.4	B	18.5	B

Southbound

L	301	1805	0.03	0.17	31.4	C		
	1805	3610	0.49	0.50	15.2	B	15.2	B
	808	1615	0.05	0.50	11.5	B		

Intersection Delay = 17.8 (sec/veh) Intersection LOS = B

C17

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: Del Rio

Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
LGConfig							L	TR		L	T	R
Volume	38	0	7	26	1	25	15	1118	12	17	805	33
Lane Width							12.0	12.0		12.0	12.0	12.0
RTOR Vol							0		0		0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru		A	
Right	A				Right		A	
Peds					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru		A	
Right	A				Right		A	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		15.0				15.0	45.0	
Yellow		3.0				3.0	3.0	
All Red		2.0				2.0	2.0	
						Cycle Length:	90.0	secs

Intersection Performance Summary

Appr/ Lane Lane Grp	Lane Group	Adj Sat Capacity	Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay LOS	Delay LOS

Eastbound

LTR	230	1379	0.22	0.17	32.9	C	32.9	C
-----	-----	------	------	------	------	---	------	---

Westbound

LTR	250	1502	0.23	0.17	33.0	C	33.0	C
-----	-----	------	------	------	------	---	------	---

Northbound

L	301	1805	0.02	0.17	31.4	C		
TR	1802	3604	0.70	0.50	18.5	B	18.5	B

Southbound

L	301	1805	0.03	0.17	31.4	C		
T	1805	3610	0.50	0.50	15.2	B	15.2	B
R	808	1615	0.05	0.50	11.5	B		

Intersection Delay = 17.8 (sec/veh) Intersection LOS = B

C8

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 HW St: Del Rio

Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Config	LTR			LTR			L TR			L T R		
Volume	40	0	7	125	1	27	15	1531	56	17	1571	35
Lane Width	12.0			12.0			12.0 12.0			12.0 12.0 12.0		
TOR Vol	0			0			0			0		

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	A				NB	Left	A	
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
WB	Left	A				SB	Left	A	
	Thru	A					Thru	A	
	Right	A					Right	A	
	Peds						Peds		
**3	Right					EB	Right		
3	Right					WB	Right		
Green		15.0					15.0	45.0	
Yellow		3.0					3.0	3.0	
All Red		2.0					2.0	2.0	
							Cycle Length: 90.0 secs		

Intersection Performance Summary

Oppr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay LOS	Delay LOS
Eastbound								
LTR		234	1401	0.22	0.17	32.9	C	32.9 C
Westbound								
LTR		226	1353	0.75	0.17	49.0	D	49.0 D
Northbound								
L		301	1805	0.02	0.17	31.4	C	
R		1796	3591	0.98	0.50	39.1	D	39.1 D
Southbound								
L		301	1805	0.03	0.17	31.4	C	
		1805	3610	0.97	0.50	36.0	D	35.5 D
R		808	1615	0.05	0.50	11.6	B	
								Intersection Delay = 37.7 (sec/veh) Intersection LOS = D

(19)

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: Del Rio
 Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
LGConfig		LTR			LTR		L	TR		L	T	R
Volume	40	0	7	125	1	27	15	1534	56	17	1572	35
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol		0			0			0			0	

Duration	0.25	Area Type: All other areas						
Signal Operations								
Phase Combination	1	2	3	4		5	6	7
EB Left	A				NB	Left	A	
Thru	A					Thru		A
Right	A					Right		A
Peds						Peds		
WB Left	A				SB	Left	A	
Thru	A					Thru		A
Right	A					Right		A
Peds						Peds		
NB Right					EB	Right		
SB Right					WB	Right		
Green	15.0					15.0	45.0	
Yellow	3.0					3.0	3.0	
All Red	2.0					2.0	2.0	
Cycle Length: 90.0								secs

Intersection Performance Summary

Appr/ Lane Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay LOS	Delay LOS		
Eastbound								

LTR	234	1401	0.22	0.17	32.9	C	32.9	C
-----	-----	------	------	------	------	---	------	---

Westbound

LTR	226	1353	0.75	0.17	49.0	D	49.0	D
-----	-----	------	------	------	------	---	------	---

Northbound

L	301	1805	0.02	0.17	31.4	C		
TR	1796	3591	0.98	0.50	39.5	D	39.5	D

Southbound

L	301	1805	0.03	0.17	31.4	C		
T	1805	3610	0.97	0.50	36.1	D	35.6	D
R	808	1615	0.05	0.50	11.6	B		

Intersection Delay = 38.0 (sec/veh) Intersection LOS = D

C20

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 W St: Del Rio

Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Config			LTR			LTR			TR			
Volume	24	1	16	19	4	14	7	914	12	11	1181	114
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
OR Vol		0			0			0			0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
;					WB Right			
Green	15.0				15.0	45.0		
Yellow	3.0				3.0	3.0		
Red	2.0				2.0	2.0		
					Cycle Length:	90.0	secs	

Intersection Performance Summary

Approach	Lane Group	Adj Sat Capacity	Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
Eastbound							

Eastbound

EB	250	1498	0.18	0.17	32.6	C	32.6	C
----	-----	------	------	------	------	---	------	---

Eastbound

EB	257	1543	0.16	0.17	32.4	C	32.4	C
----	-----	------	------	------	------	---	------	---

Northbound

EB	301	1805	0.03	0.17	31.4	C		
EB	1802	3603	0.57	0.50	16.2	B	16.3	B

Southbound

EB	301	1805	0.04	0.17	31.5	C		
EB	1805	3610	0.73	0.50	19.2	B	18.7	B
EB	808	1615	0.16	0.50	12.3	B		

Intersection Delay = 18.2 (sec/veh) Intersection LOS = B

C21

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: Del Rio

Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
LGConfig		LTR			LTR		L	TR		L	T	R
Volume	24	1	16	20	4	14	7	916	12	11	1185	114
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol		0			0			0			0	

Duration	0.25	Area Type: All other areas							
Signal Operations									
Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB	Left	A		
Thru	A					Thru		A	
Right	A					Right		A	
Peds						Peds			
WB Left	A				SB	Left	A		
Thru	A					Thru		A	
Right	A					Right		A	
Peds						Peds			
NB Right					EB	Right			
SB Right					WB	Right			
Green	15.0					15.0	45.0		
Yellow	3.0					3.0	3.0		
All Red	2.0					2.0	2.0		
Cycle Length: 90.0 secs									

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay LOS	Delay LOS
Eastbound								

EB Left	250	1497	0.18	0.17	32.6	C	32.6	C
---------	-----	------	------	------	------	---	------	---

Westbound

EB Thru	256	1537	0.16	0.17	32.4	C	32.4	C
---------	-----	------	------	------	------	---	------	---

Northbound

EB Left	301	1805	0.03	0.17	31.4	C		
EB Thru	1802	3603	0.57	0.50	16.2	B	16.3	B

Southbound

EB Left	301	1805	0.04	0.17	31.5	C		
EB Thru	1805	3610	0.73	0.50	19.2	B	18.7	B
EB Right	808	1615	0.16	0.50	12.3	B		

Intersection Delay = 18.2 (sec/veh) Intersection LOS = B

C22

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 SW St: Del Rio

Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Config		LTR			LTR			TR			T	
Volume	25	1	17	82	4	15	17	1659	101	12	1759	121
Lane Width		12.0			12.0			12.0			12.0	
TOR Vol		0			0			0			0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left	A				SB Left	A		
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
NB Right					EB Right			
3 Right					WB Right			
Green	15.0				12.0	48.0		
Yellow	3.0				3.0	3.0		
All Red	2.0				2.0	2.0		
					Cycle Length: 90.0 secs			

Intersection Performance Summary

Oppr/ Lane Grp	Lane Group	Adj Sat Capacity	Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay LOS	Delay LOS
Eastbound								
LTR	246	1476	0.20	0.17	32.7	C	32.7	C
Westbound								
LTR	228	1365	0.49	0.17	35.7	D	35.7	D
Northbound								
L	241	1805	0.03	0.13	34.0	C		
R	1909	3579	1.02	0.53	48.0	D	47.9	D
Southbound								
L	241	1805	0.05	0.13	34.1	C		
	1925	3610	1.02	0.53	45.3	D	43.1	D
	861	1615	0.16	0.53	10.8	B		
Intersection Delay = 45.0 (sec/veh)				Intersection LOS = D				

C23

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: Del Rio

Inter.: Sweetwater/Del Rio
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	0	0	1	0	1	2	0	1	2	1
LGConfig			LTR			LTR			TR			
Volume	25	1	17	83	4	15	7	1661	101	12	1763	121
Lane Width			12.0			12.0		12.0	12.0		12.0	12.0
RTOR Vol			0			0		0			0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB	Left	A	
Thru	A					Thru		A
Right	A					Right		A
Peds						Peds		
WB Left	A				SB	Left	A	
Thru	A					Thru		A
Right	A					Right		A
Peds						Peds		
NB Right					EB	Right		
SB Right					WB	Right		
Green	15.0					12.0	48.0	
Yellow	3.0					3.0	3.0	
All Red	2.0					2.0	2.0	
							Cycle Length: 90.0	secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
				v/c	g/C		Delay LOS	Delay LOS
Eastbound								

Eastbound								
LTR	246	1477	0.20	0.17	32.7	C	32.7	C

Westbound

Westbound								
LTR	227	1364	0.50	0.17	35.8	D	35.8	D

Northbound

Northbound								
L	241	1805	0.03	0.13	34.0	C		
TR	1909	3579	1.03	0.53	48.4	D	48.4	D

Southbound

Southbound								
L	241	1805	0.05	0.13	34.1	C		
T	1925	3610	1.02	0.53	46.0	D	43.7	D
R	861	1615	0.16	0.53	10.8	B		

Intersection Delay = 45.5 (sec/veh) Intersection LOS = D

C24

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 /W St: SR-94 Eastbound

Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
GConfig	LT		R					T	R	L	T	
Volume	90	1	518				982	223	94	312		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0	12.0	
TOR Vol			100					50				

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left				SB	Left A			
Thru					Thru A	A		
Right					Right			
Peds					Peds			
"B Right				EB	Right			
B Right				WB	Right			
Green	35.0				10.0	30.0		
Yellow	3.0				3.0	3.0		
All Red	2.0				2.0	2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Approach	Lane Group	Lane Group	Adj Sat		Ratios		Lane Group	Approach
			Capacity	Flow Rate	v/c	g/C		
<hr/>								

Eastbound

LT	704	1810	0.14	0.39	17.9	B	26.4	C
	628	1615	0.74	0.39	28.2	C		

Eastbound

Northbound

1203	3610	0.91	0.33	38.7	D	36.4	D	
538	1615	0.36	0.33	23.1	C			
<hr/>								
Southbound								
201	1805	0.52	0.11	40.1	D			
1805	3610	0.19	0.50	12.5	B	18.9	B	

Intersection Delay = 30.5 (sec/veh) Intersection LOS = C

C2S

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: SR-94 Eastbound

Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
LGConfig		LT	R					T	R	L	T	
Volume	90	1	519				984	224	94	313		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0	12.0	
RTOR Vol			100					50				

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left					SB Left	A		
Thru					Thru	A	A	
Right					Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	35.0					10.0	30.0	
Yellow	3.0					3.0	3.0	
All Red	2.0					2.0	2.0	
						Cycle Length:	90.0	secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Capacity	Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		

Eastbound

LT	704	1810	0.14	0.39	17.9	B	26.5	C
R	628	1615	0.74	0.39	28.4	C		

Westbound

Northbound

T	1203	3610	0.91	0.33	38.9	D	36.5	D
R	538	1615	0.36	0.33	23.1	C		

Southbound

L	201	1805	0.52	0.11	40.1	D		
T	1805	3610	0.19	0.50	12.5	B	18.8	B

Intersection Delay = 30.6 (sec/veh) Intersection LOS = C

C26

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 'W St: SR-94 Eastbound

Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
Config		LT	R					T	R	L	T	
Volume	95	1	918				1322	304	100	681		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0	12.0	
TOR Vol			0					60				

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left					SB Left	A		
Thru					Thru	A	A	
Right					Right			
Peds					Peds			
NB Right					EB Right	A	A	
3 Right					WB Right			
Green	35.0				8.0	32.0		
Yellow	3.0				3.0	3.0		
All Red	2.0				2.0	2.0		

Cycle Length: 90.0 secs

Intersection Performance Summary

Approach	Lane Group	Lane Group Capacity	Adj Sat (s)	Ratios		Delay LOS	Lane Group	Approach
				v/c	g/C			
Eastbound								
LT	704	1810	0.15	0.39	18.0	B	2.4	A

LT	1615	1615	0.63	1.00	0.8	A
Eastbound						

Northbound

-	1284	3610	1.14	0.36	103.5	F	91.0	F
-	574	1615	0.47	0.36	23.1	C		
Southbound								
L	160	1805	0.69	0.09	52.0	D		
L	1805	3610	0.42	0.50	14.4	B	19.2	B

Intersection Delay = 47.6 (sec/veh) Intersection LOS = D

C27

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: SR-94 Eastbound

Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
LGConfig		LT	R					T	R	L	T	
Volume	95	1	919				1324	305	100	682		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0	12.0	
RTOR Vol		0					60					

Duration	0.25	Area Type: All other areas							
Signal Operations									
Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left				
Thru	A				Thru	A			
Right	A				Right	A			
Peds					Peds				
WB Left					SB Left	A			
Thru					Thru	A	A		
Right					Right				
Peds					Peds				
NB Right					EB Right	A	A		
SB Right					WB Right				
Green	35.0					8.0	32.0		
Yellow	3.0					3.0	3.0		
All Red	2.0					2.0	2.0		
Cycle Length: 90.0 secs									

Intersection Performance Summary

Appr/ Lane Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
			v/c	g/C	Delay	LOS	Delay	LOS

Eastbound

LT	704	1810	0.15	0.39	18.0	B	2.4	A
R	1615	1615	0.63	1.00	0.8	A		

Westbound

Northbound

T	1284	3610	1.15	0.36	104.2	F	91.5	F
R	574	1615	0.47	0.36	23.1	C		

Southbound

L	160	1805	0.69	0.09	52.0	D		
T	1805	3610	0.42	0.50	14.4	B	19.2	B

Intersection Delay = 47.8 (sec/veh) Intersection LOS = D

C28

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 'W St: SR-94 Eastbound

Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
Config		LT	R					T	R	L	T	
volume	141	3	850				709	236	1212	468		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0		
TOR Vol		0					0					

Duration 0.25 Area Type: All other areas

Signal Operations

Base Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left					SB Left	A		
Thru					Thru	A	A	
Right					Right			
Peds					Peds			
NB Right					EB Right	A	A	
WB Right					WB Right			
Green	35.0				15.0	27.0		
Yellow	3.0				3.0	3.0		
All Red	2.0				2.0	2.0		
					Cycle Length: 92.0 secs			

Intersection Performance Summary

Oppr/ Lane Line Grp	Lane Group	Adj Sat Flow Rate	Ratios		Lane Group	Approach	
			(s)	v/c		Delay LOS	Delay LOS
<hr/>							

Eastbound

LT	689	1811	0.23	0.38	19.5	B	3.3	A
-	1615	1615	0.58	1.00	0.6	A		

Eastbound

LT	1059	3610	0.74	0.29	32.3	C	31.4	C
-	474	1615	0.55	0.29	28.8	C		

Southbound

LT	294	1805	0.80	0.16	51.9	D		
-	1844	3610	0.28	0.51	12.9	B	25.1	C

Intersection Delay = 19.1 (sec/veh) Intersection LOS = B

C29

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: SR-94 Eastbound
 Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
LGConfig		LT	R					T	R	L	T	
Volume	141	3	852				710	237	212	470		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0	12.0	
RTOR Vol		0					0					

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB	Left		
Thru	A				Thru		A	
Right	A				Right		A	
Peds					Peds			
WB Left				SB	Left	A		
Thru					Thru	A	A	
Right					Right			
Peds					Peds			
NB Right				EB	Right	A	A	
SB Right				WB	Right			
Green	35.0				15.0	27.0		
Yellow	3.0				3.0	3.0		
All Red	2.0				2.0	2.0		
					Cycle Length:	92.0	secs	

Intersection Performance Summary

Appr/ Lane	Lane Group	Adj Sat	Ratios		Lane Group		Approach	
			Flow Rate	(s)	v/c	g/C	Delay LOS	Delay LOS
Eastbound								

LT	689	1811	0.23	0.38	19.5	B	3.3	A
R	1615	1615	0.59	1.00	0.6	A		

Westbound

Northbound

T	1059	3610	0.75	0.29	32.3	C	31.4	C
R	474	1615	0.55	0.29	28.9	C		

Southbound

L	294	1805	0.80	0.16	51.9	D		
T	1844	3610	0.28	0.51	13.0	B	25.1	C

Intersection Delay = 19.1 (sec/veh) Intersection LOS = B

C30

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 /W St: SR-94 Eastbound

Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
GConfig		LT	R					T	R	L	T	
Volume	149	3	1180				1285	405	225	724		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0		
.TOR Vol			0					100				

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			*
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left				SB	Left	A		
Thru					Thru	A	A	
Right					Right			
Peds					Peds			
NB Right					EB Right	A	A	
B Right					WB Right			
Green		25.0				15.0	35.0	
Yellow		3.0				3.0	3.0	
All Red		2.0				2.0	2.0	
					Cycle Length:	90.0	secs	

Intersection Performance Summary

Appr/ Lane	Lane Group	Adj Sat Capacity	Flow Rate (s)	Ratios		Lane Group	Approach
				v/c	g/C		
astbound							

LT	503	1811	0.34	0.28	26.3	C	5.9	A
R	1615	1615	0.81	1.00	3.3	A		

estbound

LT	1404	3610	1.02	0.39	55.9	E	49.4	D
R	628	1615	0.54	0.39	22.2	C		

Southbound	L	301	1805	0.83	0.17	53.8	D	
	R	2206	3610	0.36	0.61	8.9	A	19.5
							B	

Intersection Delay = 27.1 (sec/veh) Intersection LOS = C

C31

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: SR-94 Eastbound

Inter.: SR94 EB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	1	0	0	0	0	2	1	1	2	0
LGConfig		LT	R					T	R	L	T	
Volume	149	3	1182				1286	406	225	726		
Lane Width		12.0	12.0				12.0	12.0	12.0	12.0	12.0	
RTOR Vol		0						100				

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A				NB Left			
Thru	A				Thru	A		
Right	A				Right	A		
Peds					Peds			
WB Left					SB Left	A		
Thru					Thru	A	A	
Right					Right			
Peds					Peds			
NB Right					EB Right	A	A	
SB Right					WB Right			
Green	25.0					15.0	35.0	
Yellow	3.0					3.0	3.0	
All Red	2.0					2.0	2.0	
						Cycle Length:	90.0	secs

Intersection Performance Summary

Appr/ Lane Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach	
			v/c	g/C		Delay LOS	Delay LOS
Eastbound							

LT	503	1811	0.34	0.28	26.3	C	5.9	A
R	1615	1615	0.81	1.00	3.3	A		

Westbound

Northbound

T	1404	3610	1.02	0.39	56.1	E	49.6	D
R	628	1615	0.54	0.39	22.2	C		
Southbound								
L	301	1805	0.83	0.17	53.8	D		
T	2206	3610	0.37	0.61	8.9	A	19.5	B

Intersection Delay = 27.2 (sec/veh) Intersection LOS = C

C32

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 SW St: SR-94 WB

Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
Config				LTR			L	T	R	L	T	R
Volume				165	58	216	672	389	43	11	234	86
Lane Width				12.0			12.0	12.0	12.0	12.0	12.0	12.0
TOR Vol				0			0	0	0	0		

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8	
EB Left					NB	Left	A	A	
Thru						Thru	A	A	
Right						Right	A	A	
Peds						Peds			
WB Left		A			SB	Left	A		
Thru		A				Thru		A	
Right		A				Right		A	
Peds						Peds			
NB Right					EB	Right			
EB Right					WB	Right			
Green		28.0					1.0	34.0	12.0
Yellow		3.0					3.0	0.0	3.0
All Red		2.0					2.0	0.0	2.0
							Cycle Length: 90.0 secs		

Intersection Performance Summary

Approach	Lane Group	Adj Sat	Flow Rate	Ratios		Lane Group	Approach		
				Capacity	(s)	v/c	g/C		
Eastbound									

Eastbound

EB	542	1741	0.90	0.31	47.4	D	47.4	D

Northbound

EB	802	1805	0.93	0.44	41.1	D		
WB	1845	3610	0.23	0.51	12.3	B	29.8	C
EB	825	1615	0.06	0.51	11.1	B		

Southbound

EB	20	1805	0.05	0.01	45.1	D		
WB	481	3610	0.54	0.13	37.7	D	37.6	D
EB	215	1615	0.45	0.13	37.4	D		

Intersection Delay = 35.3 (sec/veh) Intersection LOS = D

C23

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: SR-94 WB

Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
LGConfig	.				LTR		L	T	R	L	T	R
Volume				165	58	216	674	398	43	1	234	86
Lane Width					12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol						0		0			0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left				NB	Left	A	A	
Thru					Thru		A	A
Right					Right		A	A
Peds					Peds			
WB Left	A			SB	Left	A		
Thru	A				Thru		A	
Right	A				Right		A	
Peds					Peds			
NB Right				EB	Right			
SB Right				WB	Right			
Green	28.0				1.0	34.0	12.0	
Yellow	3.0				3.0	0.0	3.0	
All Red	2.0				2.0	0.0	2.0	
					Cycle Length: 90.0 secs			

Intersection Performance Summary

Appr/ Lane	Lane Group	Adj Sat	Flow Rate	Ratios	Lane Group	Approach
Lane	Group		(s)	v/c g/C	Delay LOS	Delay LOS
Grp	Capacity					
Eastbound						

Westbound

LTR	542	1741	0.90	0.31	47.4	D	47.4	D
-----	-----	------	------	------	------	---	------	---

Northbound

L	802	1805	0.93	0.44	41.5	D		
T	1845	3610	0.24	0.51	12.3	B	29.9	C
R	825	1615	0.06	0.51	11.1	B		

Southbound

L	20	1805	0.05	0.01	45.1	D		
T	481	3610	0.54	0.13	37.7	D	37.6	D
R	215	1615	0.45	0.13	37.4	D		

Intersection Delay = 35.3 (sec/veh) Intersection LOS = D

C34

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 W St: SR-94 WB

Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
SGConfig				LTR			L T R			L T R		
Volume				328	61	229	910	508	46	11	442	91
Lane Width					12.0		12.0	12.0	12.0	12.0	12.0	12.0
FOR Vol					0			0			0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB	Left	A	A
Thru						Thru	A	A
Right						Right	A	A
Peds						Peds		
WB Left	A				SB	Left	A	
Thru	A					Thru		A
Right	A					Right		A
Peds						Peds		
EB Right	A				EB	Right		
B Right	A				WB	Right		
Green	28.0					1.0	34.0	12.0
Yellow	3.0					3.0	0.0	3.0
All Red	2.0					2.0	0.0	2.0
						Cycle Length: 90.0 secs		

Intersection Performance Summary

Opp/ Lane Lane ane	Lane Group	Adj Sat Flow Rate	Ratios	Lane Group	Approach
Grp	Capacity	(s)	v/c g/C	Delay LOS	Delay LOS

astbound

estbound

LTR	547	1758	1.25	0.31	159.8	F	159.8	F
-----	-----	------	------	------	-------	---	-------	---

orthbound

L	802	1805	1.26	0.44	152.3	F		
	1845	3610	0.31	0.51	12.8	B	99.2	F
	1418	1615	0.04	0.88	0.7	A		

Southbound

L	20	1805	0.05	0.01	45.1	D		
	481	3610	1.02	0.13	85.4	F	72.8	E
	808	1615	0.13	0.50	12.1	B		

Intersection Delay = 108.1 (sec/veh) Intersection LOS = F

C35

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: AM
 Project ID: 040906 Montemar
 E/W St: SR-94 WB
 Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
LGConfig				LTR			L	T	R	L	T	R
Volume				328	61	229	912	508	46	1	442	91
Lane Width					12.0			12.0	12.0	12.0	12.0	12.0
RTOR Vol					0			0		0		

Duration	0.25	Area Type: All other areas							
Signal Operations									
Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB	Left	A	A	
Thru						Thru		A	A
Right						Right	A	A	
Peds						Peds			
WB Left	A				SB	Left	A		
Thru	A					Thru		A	
Right	A					Right		A	
Peds						Peds			
NB Right	A				EB	Right			
SB Right	A				WB	Right			
Green	28.0					1.0	34.0	12.0	
Yellow	3.0					3.0	0.0	3.0	
All Red	2.0					2.0	0.0	2.0	
						Cycle Length: 90.0			secs

Intersection Performance Summary

Appr/ Lane	Lane Group	Adj Sat	Ratios		Lane Group	Approach
Lane	Group	Flow Rate				
Grp	Capacity	(s)	v/c	g/C	Delay LOS	Delay LOS
Eastbound						

Westbound

LTR	547	1758	1.25	0.31	159.8	F	159.8	F
-----	-----	------	------	------	-------	---	-------	---

Northbound

L	802	1805	1.26	0.44	153.3	F		
T	1845	3610	0.31	0.51	12.8	B	99.9	F
R	1418	1615	0.04	0.88	0.7	A		

Southbound

L	20	1805	0.05	0.01	45.1	D		
T	481	3610	1.02	0.13	85.4	F	72.8	E
R	808	1615	0.13	0.50	12.1	B		

Intersection Delay = 108.5 (sec/veh) Intersection LOS = F

C36

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 'W St: SR-94 WB
 Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
Config					LTR		L	T	R	L	T	R
Volume				219	38	204	533	247	86	16	448	97
Line Width					12.0		12.0	12.0	12.0	12.0	12.0	12.0
TOR Vol						0		0			0	

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination				1	2	3	4	5	6	7	8
EB Left								NB	Left	A	A
Thru									Thru	A	A
Right									Right	A	A
Peds									Peds		
WB Left		A					SB	Left	A		
Thru		A						Thru		A	
Right		A						Right		A	
Peds								Peds			
EB Right		A					EB	Right			
WB Right		A					WB	Right			
Green		30.0						3.0	22.0	20.0	
Yellow		3.0						3.0	0.0	3.0	
Red		2.0						2.0	0.0	2.0	
								Cycle Length: 90.0			secs

Intersection Performance Summary

Oppr/ Lane Grp	Lane Group	Adj Sat Capacity	Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group	Approach
						Delay LOS	Delay LOS

Eastbound

Westbound

TR	582	1745	0.88	0.33	42.8	D	42.8	D
Northbound								
L	602	1805	0.98	0.33	62.1	E		
	1685	3610	0.16	0.47	13.9	B	42.3	D
	1382	1615	0.07	0.86	1.0	A		
Southbound								
R	60	1805	0.12	0.03	43.1	D		
	802	3610	0.62	0.22	33.1	C	28.7	C
	987	1615	0.11	0.61	7.3	A		

Intersection Delay = 38.4 (sec/veh) Intersection LOS = D

C37

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: SR-94 WB
 Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Existing+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
LGConfig	.				LTR		L	T	R	L	T	R
Volume				220	38	204	534	247	86	16	449	97
Lane Width					12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol						0		0			0	

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left				NB	Left	A	A	
Thru					Thru		A	A
Right					Right		A	A
Peds					Peds			
WB Left		A		SB	Left	A		
Thru		A			Thru			A
Right		A			Right			A
Peds					Peds			
NB Right		A			EB	Right		
SB Right		A			WB	Right		
Green	30.0				3.0	22.0	20.0	
Yellow	3.0				3.0	0.0	3.0	
All Red	2.0				2.0	0.0	2.0	
					Cycle Length: 90.0 secs			

Intersection Performance Summary

Appr/ Lane	Lane Group	Adj Sat	Ratios	Lane Group	Approach
Lane	Group	Flow Rate	v/c	Delay LOS	Delay LOS
Grp	Capacity	(s)	g/C		

Eastbound

Westbound

LTR	582	1745	0.88	0.33	43.0	D	43.0	D
-----	-----	------	------	------	------	---	------	---

Northbound

L	602	1805	0.99	0.33	62.5	E		
T	1685	3610	0.16	0.47	13.9	B	42.6	D
R	1382	1615	0.07	0.86	1.0	A		

Southbound

L	60	1805	0.12	0.03	43.1	D		
T	802	3610	0.62	0.22	33.1	C	28.7	C
R	987	1615	0.11	0.61	7.3	A		

Intersection Delay = 38.6 (sec/veh) Intersection LOS = D

C38

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 /W St: SR-94 WB

Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative

N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
EGConfig					LTR		L	T	R	L	T	R
Volume				324	40	216	925	439	91	16	598	103
Lane Width					12.0		12.0	12.0	12.0	12.0	12.0	12.0
FOR Vol					0		0	0	0	0	0	0

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8	
EB Left					NB	Left	A	A	
Thru						Thru	A	A	
Right						Right	A	A	
Peds						Peds			
WB Left		A			SB	Left	A		
Thru		A				Thru		A	
Right		A				Right		A	
Peds						Peds			
NB Right		A			EB	Right			
3 Right		A			WB	Right			
Green		30.0					3.0	27.0	15.0
Yellow		3.0					3.0	0.0	3.0
Red		2.0					2.0	0.0	2.0
							Cycle Length: 90.0 secs		

Intersection Performance Summary

Approach	Lane Group	Adj Sat	Ratios		Lane Group	Approach
			Flow Rate	(s)		
Eastbound						

Eastbound

LTR	585	1755	1.10	0.33	97.8	F	97.8	F
-----	-----	------	------	------	------	---	------	---

Northbound

L	702	1805	1.46	0.39	244.3	F		
-	1685	3610	0.29	0.47	14.9	B	159.9	F
	1382	1615	0.07	0.86	1.0	A		

Southbound

L	60	1805	0.12	0.03	43.1	D		
-	602	3610	1.10	0.17	105.6	F	91.1	F
	897	1615	0.13	0.56	9.6	A		

Intersection Delay = 129.0 (sec/veh) Intersection LOS = F

C39

HCS2000: Signalized Intersections Release 4.1d

Analyst: bh
 Agency: Darnell
 Date: 12/2004
 Period: PM
 Project ID: 040906 Montemar
 E/W St: SR-94 WB

Inter.: SR-94 WB/Sweetwater Spg
 Area Type: All other areas
 Jurisd: County SD
 Year : Cumulative+Project
 N/S St: Sweetwater Springs

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	1	0	1	2	1	1	2	1
LGConfig				LTR			L	T	R	L	T	R
Volume				325	40	216	926	439	91	6	599	103
Lane Width					12.0			12.0	12.0	12.0	12.0	12.0
RTOR Vol					0			0		0		

Duration 0.25 Area Type: All other areas
 Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB	Left	A	A
Thru						Thru	A	A
Right						Right	A	A
Peds						Peds		
WB Left	A				SB	Left	A	
Thru	A					Thru		A
Right	A					Right		A
Peds						Peds		
NB Right	A				EB	Right		
SB Right	A				WB	Right		
Green	30.0					3.0	27.0	15.0
Yellow	3.0					3.0	0.0	3.0
All Red	2.0					2.0	0.0	2.0
						Cycle Length: 90.0 secs		

Intersection Performance Summary

Appr/ Lane Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios		Lane Group	Approach
			v/c	g/C		

Eastbound

Westbound

LTR	585	1755	1.10	0.33	98.5	F	98.5	F
-----	-----	------	------	------	------	---	------	---

Northbound

L	702	1805	1.47	0.39	244.9	F		
T	1685	3610	0.29	0.47	14.9	B	160.3	F
R	1382	1615	0.07	0.86	1.0	A		

Southbound

L	60	1805	0.12	0.03	43.1	D		
T	602	3610	1.11	0.17	106.8	F	92.2	F
R	897	1615	0.13	0.56	9.6	A		

Intersection Delay = 129.6 (sec/veh) Intersection LOS = F

C40

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: AM
 Intersection: SR94 WB Off/Agua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing
 Project ID: 040906 Montemar
 East/West Street: Agua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Major Street:	Approach	Vehicle Volumes and Adjustments					
		Eastbound			Westbound		
Movement	1	2	3		4	5	6
L	T	R		L	T	R	

Volume 1 50 98
 Peak-Hour Factor, PHF 1.00 1.00 1.00
 Hourly Flow Rate, HFR 1 50 98
 Percent Heavy Vehicles 0 -- -- -- -- --
 Median Type/Storage Undivided /
 Is Channelized?
 lanes 0 1 1
 Configuration LT T
 Upstream Signal? No No

Minor Street:	Approach	Northbound						Southbound		
		Northbound			Southbound			10	11	12
Movement	7	8	9		10	11	12	L	T	R
L	T	R		L	T	R				

Volume 361 3
 Peak Hour Factor, PHF 1.00 1.00
 Hourly Flow Rate, HFR 361 3
 Percent Heavy Vehicles 0 0
 Percent Grade (%) 0 0
 Shared Approach: Exists?/Storage / /
 lanes 1 1
 Configuration L R

Approach	Delay, Queue Length, and Level of Service									
	Movement	EB	WB	Northbound			Southbound			
		1	4		7	8	9		10	11
lane Config	LT				L		R			
(vph)	1			361		3				
(m) (vph)	1508			846		1024				
v/c	0.00			0.43		0.00				
95% queue length	0.00			2.16		0.01				
control Delay	7.4			12.4		8.5				
LOS	A			B		A				
Approach Delay				12.4						
Approach LOS				B						

C41

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: AM
 Intersection: SR94 WB Off/Aqua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing+Project
 Project ID: 040906 Montemar
 East/West Street: Aqua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach	Eastbound				Westbound		
		Movement	1	2	3		4	5
			L	T	R		L	T
Volume			1	50			98	
Peak-Hour Factor, PHF		1.00		1.00			1.00	
Hourly Flow Rate, HFR		1		50			98	
Percent Heavy Vehicles		0	--	--			--	--
Median Type/Storage		Undivided			/			
RT Channelized?								
Lanes			0	1			1	
Configuration				LT			T	
Upstream Signal?				No			No	
Minor Street:	Approach	Northbound				Southbound		
		Movement	7	8	9		10	11
			L	T	R		L	T
Volume			361		3			
Peak Hour Factor, PHF		1.00			1.00			
Hourly Flow Rate, HFR		361			3			
Percent Heavy Vehicles		0			0			
Percent Grade (%)			0				0	
Flared Approach: Exists?/Storage						/		/
Lanes			1		1			
Configuration				L	R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound				Southbound			
			1	4		7	8	9		10
Movement	LT			L		R				
Lane Config										
v (vph)	1			361		3				
C(m) (vph)	1508			846		1024				
v/c	0.00			0.43		0.00				
95% queue length	0.00			2.16		0.01				
Control Delay	7.4			12.4		8.5				
LOS	A			B		A				
Approach Delay				12.4						
Approach LOS				B						

C42

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: AM
 Intersection: SR94 WB Off/Agua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Cumulative
 Project ID: 040906 Montemar
 East/West Street: Agua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound			Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R
Volume	1	53				104	
Peak-Hour Factor, PHF	1.00	1.00				1.00	
Hourly Flow Rate, HFR	1	53				104	
Percent Heavy Vehicles	0	--	--			--	--
Median Type/Storage	Undivided			/			
T Channelized?							
lanes	0	1				1	
Configuration	LT					T	
Upstream Signal?	No					No	

Minor Street:	Approach Movement	Northbound			Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R
Volume	535			3			
Peak Hour Factor, PHF	1.00			1.00			
Hourly Flow Rate, HFR	535			3			
Percent Heavy Vehicles	0			0			
Percent Grade (%)	0				0		
Shared Approach: Exists?/Storage	Exists?/Storage			/			/
lanes	1		1				
Configuration	L R						

Delay, Queue Length, and Level of Service

Approach Movement	Lane Config	Northbound					Southbound		
		EB	WB	7	8	9	10	11	12
		1 LT	4		L	R			
(vph)	1			535		3			
(m) (vph)	1500			836		1020			
v/c	0.00			0.64		0.00			
95% queue length	0.00			4.74		0.01			
control Delay	7.4			16.6		8.5			
OS	A			C		A			
Approach Delay				16.6					
Approach LOS				C					

C43

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: AM
 Intersection: SR94 WB Off/Agua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Cumulative+Project
 Project ID: 040906 Montemar
 East/West Street: Agua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach	Eastbound			Westbound				
		Movement	1	2	3	4	5	6	
			L	T	R		L	T	R

Volume	1	53					104	
Peak-Hour Factor, PHF	1.00	1.00					1.00	
Hourly Flow Rate, HFR	1	53					104	
Percent Heavy Vehicles	0	--	--				--	--
Median Type/Storage		Undivided			/			
RT Channelized?								
Lanes	0	1					1	
Configuration		LT					T	
Upstream Signal?		No					No	

Minor Street:	Approach	Northbound			Southbound				
		Movement	7	8	9		10	11	12
			L	T	R		L	T	R

Volume	535	3						
Peak Hour Factor, PHF	1.00		1.00					
Hourly Flow Rate, HFR	535		3					
Percent Heavy Vehicles	0		0					
Percent Grade (%)		0				0		
Flared Approach: Exists?/Storage				/			/	
Lanes	1		1					
Configuration		L		R				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound						
			1	4		7	8	9		10	11	12
			LT			L		R				
v (vph)	1		535			3						
C(m) (vph)	1500		836			1020						
v/c	0.00		0.64			0.00						
95% queue length	0.00		4.74			0.01						
Control Delay	7.4		16.6			8.5						
LOS	A		C			A						
Approach Delay			16.6									
Approach LOS			C									

C44

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: PM
 Intersection: SR94 WB Off/Aqua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing
 Project ID: 040906 Montemar
 East/West Street: Aqua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Major Street:	Approach	Vehicle Volumes and Adjustments					
		Eastbound			Westbound		
Movement	1 L	2 T	3 R	4 L	5 T	6 R	
Volume	1	95					81

Peak-Hour Factor, PHF	1.00	1.00					1.00
Burly Flow Rate, HFR	1	95					81
Percent Heavy Vehicles	0	--	--				--
Median Type/Storage	Undivided			/			
RT Channelized?							
lanes	0	1					1
Configuration	LT						T
Upstream Signal?	No						No

Minor Street:	Approach	Northbound						Southbound	
		Movement	7 L	8 T	9 R	10 L	11 T	12 R	
Volume		376			1				

Peak Hour Factor, PHF	1.00		1.00					
Burly Flow Rate, HFR	376		1					
Percent Heavy Vehicles	0		0					
Percent Grade (%)		0					0	
Shared Approach: Exists?/Storage				/				/
lanes		1		1				
Configuration		L		R				

Approach	Delay, Queue Length, and Level of Service									
	EB	WB	Northbound				Southbound			
Movement	1	4		7	8	9		10	11	12
Line Config	LT			L		R				
" (vph)	1			376		1				
(m) (vph)	1529			815		967				
/c	0.00			0.46		0.00				
95% queue length	0.00			2.46		0.00				
Control Delay	7.4			13.1		8.7				
DS	A			B		A				
Approach Delay				13.1						
Approach LOS				B						

C4S

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: PM
 Intersection: SR94 WB Off/Agua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing+Project
 Project ID: 040906 Montemar
 East/West Street: Agua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach	Eastbound			Westbound				
		Movement	1	2	3	4	5	6	
			L	T	R		L	T	R
Volume			1	95			81		
Peak-Hour Factor, PHF		1.00	1.00				1.00		
Hourly Flow Rate, HFR		1	95				81		
Percent Heavy Vehicles		0	--	--			--	--	
Median Type/Storage		Undivided			/				
RT Channelized?									
Lanes		0	1				1		
Configuration			LT				T		
Upstream Signal?			No				No		
Minor Street:	Approach	Northbound			Southbound				
		Movement	7	8	9	10	11	12	
			L	T	R		L	T	R
Volume			377		1				
Peak Hour Factor, PHF		1.00			1.00				
Hourly Flow Rate, HFR		377			1				
Percent Heavy Vehicles		0			0				
Percent Grade (%)			0				0		
Flared Approach: Exists?/Storage						/		/	
Lanes		1		1					
Configuration			L		R				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound						
			1	4		7	8	9		10	11	12
			LT			L		R				
v (vph)	1		377			1						
C(m) (vph)	1529		815			967						
v/c	0.00		0.46			0.00						
95% queue length	0.00		2.47			0.00						
Control Delay	7.4		13.2			8.7						
LOS	A		B			A						
Approach Delay						13.1						
Approach LOS						B						

C46

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: PM
 Intersection: SR94 WB Off/Agua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Cumulative
 Project ID: 040906 Montemar
 East/West Street: Agua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach	Eastbound			Westbound		
		Movement	1	2	3	4	5
			L	T	R	L	T
Volume			1	101			86
Peak-Hour Factor, PHF			1.00	1.00			1.00
Hourly Flow Rate, HFR			1	101			86
Percent Heavy Vehicles			0	--	--		--
Median Type/Storage			Undivided			/	
Channelized?							
Lines			0	1			1
Configuration			LT				T
Upstream Signal?			No				No

Minor Street:	Approach	Northbound			Southbound		
		Movement	7	8	9	10	11
			L	T	R	L	T
Volume			501		1		
Peak Hour Factor, PHF			1.00		1.00		
Hourly Flow Rate, HFR			501		1		
Percent Heavy Vehicles			0		0		
Percent Grade (%)				0		0	
Shared Approach: Exists?/Storage					/		/
Lines				1	1		
Configuration				L	R		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
			1	4	7	8	9	10
Movement	LT			L		R		
Line Config								
(vph)			1		501		1	
(m) (vph)			1523		804		960	
v/c			0.00		0.62		0.00	
~5% queue length			0.00		4.44		0.00	
Control Delay			7.4		16.6		8.8	
LOS			A		C		A	
Approach Delay					16.6			
Approach LOS					C			

C47

TWO-WAY STOP CONTROL SUMMARY

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: PM
 Intersection: SR94 WB Off/Aqua Dulce
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Cumulative+Project
 Project ID: 040906 Montemar
 East/West Street: Aqua Dulce
 North/South Street: SR-94 WB Off
 Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street:	Approach	Eastbound			Westbound				
		Movement	1	2	3	4	5	6	
			L	T	R		L	T	R

Volume	1	101					86	
Peak-Hour Factor, PHF	1.00	1.00					1.00	
Hourly Flow Rate, HFR	1	101					86	
Percent Heavy Vehicles	0	--	--				--	--
Median Type/Storage	Undivided			/				
RT Channelized?								
Lanes	0	1					1	
Configuration		LT					T	
Upstream Signal?			No				No	

Minor Street:	Approach	Northbound			Southbound				
		Movement	7	8	9	10	11	12	
			L	T	R		L	T	R

Volume	502	1						
Peak Hour Factor, PHF	1.00	1.00						
Hourly Flow Rate, HFR	502	1						
Percent Heavy Vehicles	0	0						
Percent Grade (%)		0					0	
Flared Approach: Exists?/Storage	Exists?/Storage			/				/
Lanes	1	1						
Configuration		L		R				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound					
			1	4		7	8	9		10	11
Movement	LT			L		R					
Lane Config											
v (vph)	1		502			1					
C(m) (vph)	1523		804			960					
v/c	0.00		0.62			0.00					
95% queue length	0.00		4.46			0.00					
Control Delay	7.4		16.6			8.8					
LOS	A		C			A					
Approach Delay			16.6								
Approach LOS			C								

(48)

artshorn
arnell

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ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: AM
 Intersection: Austin/Barcelona
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing
 Project ID: 040906 - Montemar
 East/West Street: Austin
 North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
volume	16	94	1	10	91	44	6	43	20	35	9	11

% Thru Left Lane

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Configuration	LTR	LTR	LTR	LTR
PHF	1.00	1.00	1.00	1.00
Low Rate	111	145	69	55
Heavy Veh	0	0	0	0
No. Lanes	1	1	1	1
Opposing-Lanes	1	1	1	1
Conflicting-lanes	1	1	1	1
Geometry group	1	1	1	1
Duration, T	0.25 hrs.			

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Slow Rates:				
Total in Lane	111	145	69	55
Left-Turn	16	10	6	35
Right-Turn	1	44	20	11
Prop. Left-Turns	0.1	0.1	0.1	0.6
Prop. Right-Turns	0.0	0.3	0.3	0.2
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0
Geometry Group	1	1	1	1
Adjustments Exhibit 17-33:				
HLT-adj	0.2	0.2	0.2	0.2

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hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.2	-0.2	0.0

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	111		145		69		55	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.10		0.13		0.06		0.05	
hd, final value	4.37		4.15		4.38		4.56	
x, final value	0.13		0.17		0.08		0.07	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time	2.4		2.1		2.4		2.6	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	111		145		69		55	
Service Time	2.4		2.1		2.4		2.6	
Utilization, x	0.13		0.17		0.08		0.07	
Dep. headway, hd	4.37		4.15		4.38		4.56	
Capacity	361		395		319		305	
Delay	8.05		7.97		7.78		7.90	
LOS	A		A		A		A	
Approach:								
Delay		8.05		7.97		7.78		7.90
LOS		A		A		A		A
Intersection Delay	7.95				Intersection LOS A			

CSO

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Phone:
E-Mail:

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ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: AM
 Intersection: Austin/Barcelona
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing+Project
 Project ID: 040906 - Montemar
 East/West Street: Austin
 North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	17	99	1	10	94	44	6	43	20	35	9	12

* Thru Left Lane

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Configuration	LTR	LTR	LTR	LTR
THF	1.00	1.00	1.00	1.00
Low Rate	117	148	69	56
Heavy Veh	0	0	0	0
No. Lanes	1	1	1	1
Opposing-Lanes	1	1	1	1
Conflicting-lanes	1	1	1	1
Geometry group	1	1	1	1
Duration, T	0.25 hrs.			

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Low Rates:				
Total in Lane	117	148	69	56
Left-Turn	17	10	6	35
Right-Turn	1	44	20	12
Prop. Left-Turns	0.1	0.1	0.1	0.6
Prop. Right-Turns	0.0	0.3	0.3	0.2
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0
Geometry Group	1	1	1	1
Adjustments Exhibit 17-33:				
hLT-adj	0.2	0.2	0.2	0.2

CS|

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.2	-0.2	-0.0

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	117		148		69		56	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.10		0.13		0.06		0.05	
hd, final value	4.37		4.16		4.40		4.57	
x, final value	0.14		0.17		0.08		0.07	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time	2.4		2.2		2.4		2.6	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	117		148		69		56	
Service Time	2.4		2.2		2.4		2.6	
Utilization, x	0.14		0.17		0.08		0.07	
Dep. headway, hd	4.37		4.16		4.40		4.57	
Capacity	367		398		319		306	
Delay	8.10		8.02		7.81		7.92	
LOS	A		A		A		A	
Approach:								
Delay		8.10		8.02		7.81		7.92
LOS		A		A		A		A
Intersection Delay	7.99				Intersection LOS A			

CS2

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:Mail:

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: AM
 Intersection: Austin/Barcelona
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Cumulative
 Project ID: 040906 - Montemar
 East/West Street: Austin
 North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	117	100	1	55	96	50	6	64	122	42	18	12

* Thru Left Lane

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Configuration	LTR	LTR	LTR	LTR
PHF	1.00	1.00	1.00	1.00
Flow Rate	118	201	192	72
Heavy Veh	0	0	0	0
No. Lanes	1	1	1	1
Posing-Lanes	1	1	1	1
Afflicting-lanes	1	1	1	1
Geometry group	1	1	1	1
Duration, T	0.25 hrs.			

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Flow Rates:				
Total in Lane	118	201	192	72
Left-Turn	17	55	6	42
Right-Turn	1	50	122	12
Op. Left-Turns	0.1	0.3	0.0	0.6
Op. Right-Turns	0.0	0.2	0.6	0.2
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0
Geometry Group	1	1	1	1
Adjustments Exhibit 17-33:				
hLT-adj	0.2	0.2	0.2	0.2

CS3

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.1	-0.4	0.0

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	118		201		192		72	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.10		0.18		0.17		0.06	
hd, final value	4.81		4.59		4.40		4.94	
x, final value	0.16		0.26		0.23		0.10	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time	2.8		2.6		2.4		2.9	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	118		201		192		72	
Service Time	2.8		2.6		2.4		2.9	
Utilization, x	0.16		0.26		0.23		0.10	
Dep. headway, hd	4.81		4.59		4.40		4.94	
Capacity	368		451		442		322	
Delay	8.71		9.17		8.74		8.48	
LOS	A		A		A		A	
Approach:								
Delay		8.71		9.17		8.74		8.48
LOS		A		A		A		A
Intersection Delay	8.85				Intersection LOS A			

CS4

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Phone: _____ Fax: _____
E-Mail: _____

ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: bh
Agency/Co.: Darnell
Date Performed: 12/2004
Analysis Time Period: AM
Intersection: Austin/Barcelona
Jurisdiction: County SD
Units: U. S. Customary
Analysis Year: Cumulative+Project
Project ID: 040906 - Montemar
East/West Street: Austin
North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
volume	18	105	1	55	99	50	6	64	122	42	18	13

% Thrus Left Lane

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Configuration	LTR	LTR	LTR	LTR
PHF	1.00	1.00	1.00	1.00
Low Rate	124	204	192	73
Heavy Veh	0	0	0	0
No. Lanes	1	1	1	1
Opposing-Lanes	1	1	1	1
Conflicting-lanes	1	1	1	1
Geometry group	1	1	1	1
Duration, T	0.25 hrs.			

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Low Rates:				
Total in Lane	124	204	192	73
Left-Turn	18	55	6	42
Right-Turn	1	50	122	13
Prop. Left-Turns	0.1	0.3	0.0	0.6
Prop. Right-Turns	0.0	0.2	0.6	0.2
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0
Geometry Group	1	1	1	1
Adjustments Exhibit 17-33:				
hLT-adj	0.2	0.2	0.2	0.2

CSS

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.1	-0.4	0.0

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	124		204		192		73	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.11		0.18		0.17		0.06	
hd, final value	4.82		4.61		4.43		4.96	
x, final value	0.17		0.26		0.24		0.10	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time.	2.8		2.6		2.4		3.0	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	124		204		192		73	
Service Time	2.8		2.6		2.4		3.0	
Utilization, x	0.17		0.26		0.24		0.10	
Dep. headway, hd	4.82		4.61		4.43		4.96	
Capacity	374		454		442		323	
Delay	8.78		9.23		8.79		8.51	
LOS	A		A		A		A	
Approach:								
Delay		8.78		9.23		8.79		8.51
LOS		A		A		A		A
Intersection Delay	8.90				Intersection LOS A			

C56

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Phone:
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ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: PM
 Intersection: Austin/Barcelona
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing
 Project ID: 040906 - Montemar
 East/West Street: Austin
 North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
volume	36	87	7	43	89	93	1	37	25	78	28	45

* Thru Left Lane

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Configuration	LTR	LTR	LTR	LTR
PHF	1.00	1.00	1.00	1.00
Low Rate	130	225	63	151
Heavy Veh	0	0	0	0
No. Lanes	1	1	1	1
Opposing-Lanes	1	1	1	1
Conflicting-Lanes	1	1	1	1
Geometry group	1	1	1	1
Duration, T 0.25 hrs.				

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Low Rates:				
Total in Lane	130	225	63	151
Left-Turn	36	43	1	78
Right-Turn	7	93	25	45
Prop. Left-Turns	0.3	0.2	0.0	0.5
Prop. Right-Turns	0.1	0.4	0.4	0.3
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0
Geometry Group	1	1	1	1
Adjustments Exhibit 17-33:				
hLT-adj	0.2	0.2	0.2	0.2

CS7

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.2	-0.2	-0.1

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	130		225		63		151	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.12		0.20		0.06		0.13	
hd, final value	4.72		4.39		4.71		4.74	
x, final value	0.17		0.27		0.08		0.20	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time	2.7		2.4		2.7		2.7	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	130		225		63		151	
Service Time	2.7		2.4		2.7		2.7	
Utilization, x	0.17		0.27		0.08		0.20	
Dep. headway, hd	4.72		4.39		4.71		4.74	
Capacity	380		475		313		401	
Delay	8.69		9.04		8.13		8.91	
LOS	A		A		A		A	
Approach:								
Delay		8.69		9.04		8.13		8.91
LOS		A		A		A		A
Intersection Delay	8.82				Intersection LOS	A		

CS8

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ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: PM
 Intersection: Austin/Barcelona
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Existing+Project
 Project ID: 040906 - Montemar
 East/West Street: Austin
 North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

volume	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
	37	90	7	43	96	93	1	37	25	78	28	47

% Thrus Left Lane

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	1.00		1.00		1.00		1.00	
Flow Rate	134		232		63		153	
Heavy Veh	0		0		0		0	
No. Lanes	1		1		1		1	
Opposing-Lanes	1		1		1		1	
Conflicting-lanes	1		1		1		1	
Geometry group	1		1		1		1	
Duration, T	0.25	hrs.						

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound		Westbound		Northbound			
	L1	L2	L1	L2	L1	L2		
Flow Rates:								
Total in Lane	134		232		63		153	
Left-Turn	37		43		1		78	
Right-Turn	7		93		25		47	
Prop. Left-Turns	0.3		0.2		0.0		0.5	
Prop. Right-Turns	0.1		0.4		0.4		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
Geometry Group	1		1		1		1	
Adjustments Exhibit 17-33:								
hLT-adj	0.2		0.2		0.2		0.2	

CS9

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.2	-0.2	-0.1

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	134		232		63		153	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.12		0.21		0.06		0.14	
hd, final value	4.74		4.41		4.74		4.76	
x, final value	0.18		0.28		0.08		0.20	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time	2.7		2.4		2.7		2.8	

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	134		232		63		153	
Service Time	2.7		2.4		2.7		2.8	
Utilization, x	0.18		0.28		0.08		0.20	
Dep. headway, hd	4.74		4.41		4.74		4.76	
Capacity	384		482		313		403	
Delay	8.75		9.15		8.17		8.97	
LOS	A		A		A		A	
Approach:								
Delay		8.75		9.15		8.17		8.97
LOS		A		A		A		A
Intersection Delay	8.90				Intersection LOS A			

C60

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ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: bh
 gency/Co.: Darnell
 ate Performed: 12/2004
 Analysis Time Period: PM
 ntersection: Austin/Barcelona
 urisdiction: County SD
 Units: U. S. Customary
 nalysis Year: Cumulative
 roject ID: 040906 - Montemar
 ast/West Street: Austin
 North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

Volume	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
	38	92	7	174	94	106	1	49	81	88	53	48

% Thrus Left Lane

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Configuration	LTR	LTR	LTR	LTR
PHF	1.00	1.00	1.00	1.00
low Rate	137	374	131	189
Heavy Veh	0	0	0	0
No. Lanes	1	1	1	1
Opposing-Lanes	1	1	1	1
onflicting-Lanes	1	1	1	1
Geometry group	1	1	1	1

Duration, T 0.25 hrs.

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Flow Rates:				
Total in Lane	137	374	131	189
Left-Turn	38	174	1	88
Right-Turn	7	106	81	48
rop. Left-Turns	0.3	0.5	0.0	0.5
rop. Right-Turns	0.1	0.3	0.6	0.3
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0
Geometry Group	1	1	1	1
djustments Exhibit 17-33:				
hLT-adj	0.2	0.2	0.2	0.2

(6)

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.1	-0.4	-0.1

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	137		374		131		189	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.12		0.33		0.12		0.17	
hd, final value	5.36		4.92		5.19		5.39	
x, final value	0.20		0.51		0.19		0.28	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time		3.4		2.9		3.2		3.4

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	137		374		131		189	
Service Time	3.4		2.9		3.2		3.4	
Utilization, x	0.20		0.51		0.19		0.28	
Dep. headway, hd	5.36		4.92		5.19		5.39	
Capacity	387		624		381		439	
Delay	9.73		12.96		9.40		10.51	
LOS	A		B		A		B	
Approach:								
Delay		9.73		12.96		9.40		10.51
LOS		A		B		A		B
Intersection Delay	11.31				Intersection LOS	B		

(b2)

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arnell

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E-Mail:

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ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 12/2004
 Analysis Time Period: PM
 Intersection: Austin/Barcelona
 Jurisdiction: County SD
 Units: U. S. Customary
 Analysis Year: Cumulative+Project
 Project ID: 040906 - Montemar
 East/West Street: Austin
 North/South Street: Barcelona

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	39	95	7	174	101	106	1	49	81	88	53	50

* Thru Left Lane

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Configuration	LTR	LTR	LTR	LTR
%HF	1.00	1.00	1.00	1.00
Low Rate	141	381	131	191
Heavy Veh	0	0	0	0
No. Lanes	1	1	1	1
Opposing-Lanes	1	1	1	1
Conflicting-lanes	1	1	1	1
Geometry group	1	1	1	1
Duration, T	0.25 hrs.			

Worksheet 3 - Saturation Headway Adjustment Worksheet

	Eastbound	Westbound	Northbound	Southbound
	L1	L2	L1	L2
Low Rates:				
Total in Lane	141	381	131	191
Left-Turn	39	174	1	88
Right-Turn	7	106	81	50
Prop. Left-Turns	0.3	0.5	0.0	0.5
Prop. Right-Turns	0.0	0.3	0.6	0.3
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0
Geometry Group	1	1	1	1
Adjustments Exhibit 17-33:				
hLT-adj	0.2	0.2	0.2	0.2

C63

hRT-adj	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7
hadj, computed	0.0	-0.1	-0.4	-0.1

Worksheet 4 - Departure Headway and Service Time

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	141		381		131		191	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.13		0.34		0.12		0.17	
hd, final value	5.39		4.94		5.24		5.42	
x, final value	0.21		0.52		0.19		0.29	
Move-up time, m		2.0		2.0		2.0		2.0
Service Time		3.4		2.9		3.2		3.4

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	141		381		131		191	
Service Time	3.4		2.9		3.2		3.4	
Utilization, x	0.21		0.52		0.19		0.29	
Dep. headway, hd	5.39		4.94		5.24		5.42	
Capacity	391		631		381		441	
Delay	9.83		13.24		9.47		10.60	
LOS	A		B		A		B	
Approach:								
Delay		9.83		13.24		9.47		10.60
LOS		A		B		A		B
Intersection Delay	11.49				Intersection LOS	B		

C64

OPERATIONAL ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 4/1/05
 Analysis Time Period: AM Peak
 Urban Street: Sweetwater Springs
 Direction of Travel: South-bound
 Jurisdiction: County
 Analysis Year: Near Term with project
 Project ID: 040906 - Montemar

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street flow class	Free speed (mph)	Running time (sec)	Section
0						
1	SR-94 Eastbound	0.88	2	40	79.8	1
2	Austin Drive	0.40	2	40	38.4	2
3	Jamacha Blvd					

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Sum of delay (sec)	Sum of time by section (sec)	Arterial length (mi)	Arterial LOS by section
1	1	79.8	14.4	0.0	94.2	0.88	B
3	2	38.4	32.7	0.0	71.1	0.40	D

Total travel time (x) = 285.9 sec

Total length (y) = 2.16 miles

Total travel speed, Sa = $3600 \times (y)/(x) = 27.2$ mph

Total urban street LOS (Exhibit 15-2) = C

Intersection Files in the Analysis

- 1: D:\My Documents\Darnell\040906-Montemar\HCS\NTC-Sweetwater-SR94EB-AM.hcs
- 2: D:\My Documents\Darnell\040906-Montemar\HCS\NTC-Sweetwater-Austin-AM.hcs
- 3: D:\My Documents\Darnell\040906-Montemar\HCS\NTC-Jamacha-SweetwaterSp-AM.hcs

CB5

OPERATIONAL ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 4/1/05
 Analysis Time Period: AM Peak
 Urban Street: Sweetwater Springs
 Direction of Travel: North-bound
 Jurisdiction: County
 Analysis Year: Near Term with project
 Project ID: 040906 - Montemar

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street flow class	Free speed (mph)	Running time (sec)	Section
0						
1	SR-94 Eastbound	0.88	2	40	79.8	1
2	Austin Drive	0.40	2	40	38.4	2
3	Jamacha Blvd					

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	79.8	103.5	0.0	183.4	0.88	17.3	D
2	2	38.4	29.1	0.0	67.5	0.40	21.3	D

Total travel time (x) = 350.4 sec

Total length (y) = 2.16 miles

Total travel speed, Sa = 3600 x (y)/(x) = 22.2 mph

Total urban street LOS (Exhibit 15-2) = C

Intersection Files in the Analysis

- 1: D:\My Documents\Darneill\040906-Montemar\HCS\NTC-Sweetwater-SR94EB-AM.hcs
- 2: D:\My Documents\Darneill\040906-Montemar\HCS\NTC-Sweetwater-Austin-AM.hcs
- 3: D:\My Documents\Darneill\040906-Montemar\HCS\NTC-Jamacha-SweetwaterSp-AM.hcs

C6b

OPERATIONAL ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 4/1/05
 Analysis Time Period: PM Peak
 Urban Street: Sweetwater Springs
 Direction of Travel: North-bound
 Jurisdiction: County
 Analysis Year: Near Term with project
 Project ID: 040906 - Montemar

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0						
1	SR-94 Eastbound	0.88	2	40	79.8	1
2	Austin Drive	0.40	2	40	38.4	2
3	Jamacha Blvd					

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Sum of other delay (sec)	Sum of time by section (sec)	Arterial speed (mi)	Arterial LOS by section
1	1	79.8	55.9	0.0	135.7	0.88	C
2	2	38.4	38.2	0.0	76.6	0.40	D
4							

Total travel time (x) = 312.4 sec

Total length (y) = 2.16 miles

Total travel speed, Sa = 3600 x (y)/(x) = 24.9 mph

Total urban street LOS (Exhibit 15-2) = C

Intersection Files in the Analysis

- 1: D:\My Documents\Darrell\020305-Highland\HCS\REV-NTC-Sweetwater-SR94EB-PM.hcs
- 2: D:\My Documents\Darrell\020305-Highland\HCS\REV-NTC-Sweetwater-Austin-PM.hcs
- 3: D:\My Documents\Darrell\020305-Highland\HCS\REV-MITI-NTC-Jamacha-SweetwaterSp 4:

c67

OPERATIONAL ANALYSIS

Analyst: bh
 Agency/Co.: Darnell
 Date Performed: 4/1/05
 Analysis Time Period: PM Peak
 Urban Street: Sweetwater Springs
 Direction of Travel: South-bound
 Jurisdiction: County
 Analysis Year: Near Term with project
 Project ID: 040906 - Montemar

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0						
1	SR-94 Eastbound	0.88	2	40	79.8	1
2	Austin Drive	0.40	2	40	38.4	2
3	Jamacha Blvd					
4						

Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Sum of other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	79.8	40.5	0.0	120.3	0.88	26.3	C
2	2	38.4	27.2	0.0	65.6	0.40	21.9	D
4								
5								

Total travel time (x) = 274.7 sec
 Total length (y) = 2.16 miles
 Total travel speed, Sa = $3600 \times (y)/(x)$ = 28.3 mph
 Total urban street LOS (Exhibit 15-2) = B

Intersection Files in the Analysis

1: D:\My Documents\Darrell\020305-Highland\HCS\REV-NTC-Sweetwater-SR94EB-PM.hcs
 2: D:\My Documents\Darrell\020305-Highland\HCS\REV-NTC-Sweetwater-Austin-PM.hcs
 3: D:\My Documents\Darrell\020305-Highland\HCS\REV-MITI-NTC-Jamacha-SweetwaterSp 4:
 4:

C68

APPENDIX D
Response to Comments

TM5316RPL1

1

February 14, 2005

TO: STELLA CALDWELL Project Planner
Department of Planning and Land Use (O650)

FROM: BARRY BEECH, Project Manager
Department of Public Works (O336)

TRAFFIC STUDY DATED DEC. 28, 2004 AND RECEIVED 1-12-05 BY DPLU,
TM5316RPL1

DPW and DPW Transportation Planning/Route Locations staff has reviewed the above subject document.

Address/incorporate the following in the above subject document:

Use (~~Strikeouts~~ indicate deletions, underlines indicate additions) format, or other format (such as a cover letter) to clearly indicate where the information is in the document.



The traffic study should include a description of existing conditions along Montemar Drive. The description should include paved road width and shoulder availability

add

—

2. The traffic study should address the adequacy of the corner sight distance at the Austin Drive/Montemar Drive intersection. The intersection is configured at a skewed angle. The traffic study should assess the feasibility of reconfiguring the intersection into a T-intersection.

Why

3. On January 12, 2005, the County Board of Supervisors continued for 90 to 120 days the future consideration of a Transportation Impact Fee (TIF) program. The project can either wait for the Board's decisions and the possible implementation of the TIF program or provide mitigation measures that are not dependent on the TIF program. With or without the TIF program, the project will be required to mitigate its cumulative impacts. The mitigation measures could consist of fair-share contributions to official improvement projects and/or physical/spot road/intersection improvements that are proportional to the project's cumulative traffic impacts.

D1

TM5316RPL1

2

February 14, 2005

4. The traffic study is proposing (Pg.29) fair-share contributions towards County improvement projects for Sweetwater Springs Road and Jamacha Boulevard that are not currently planned for construction such as the widening Sweetwater Springs Boulevard to a six-lane Prime Arterial. Fair-share contributions are acceptable mitigation measures only for established County Capital Improvement Program (CIP) projects. If a County CIP project is not programmed for the specific project identified in the study, the traffic study must revise its recommended mitigation measures accordingly.
5. It should be noted that Sweetwater Springs Boulevard is classified a Major road and not a Prime Arterial. The proposed mitigation measure would require a General Plan Amendment to reclassify Sweetwater Springs Boulevard.
6. The traffic study should provide a general discussion on whether construction of the SR-54 (SR-125 to I-8) facility would alleviate the projected poor LOS on Sweetwater Springs Boulevard. It should be noted that SANDAG is in the process of preparing a study for the future SR-54 corridor.

If you have any questions, please contact Kent Johnson at (858) 495-5486

BARRY BEECH
Project Manager

cc: TM5316 file; Bob Goralka, DPW(0343); Richard Chin, DPW (C343); Nick Ortiz, DPW (0343)

C:\TM5316RPL1

D2

M E M O R A N D U M

DATE: April 5, 2005

TO: Barry Beech, Project Manager, Department of Public Works

FROM: Darnell & Associates, Inc.

D&A Ref. No: 040906

RE: Montemar Drive Project, Response to Comments

We are in receipt of County comments dated February 14, 2005, and have revised our December 28, 2004 traffic study to incorporate the following revisions:

Comment 1: The traffic study should include description of Montemar Drive.

Response 1: A field check was conducted of Montemar Drive and the results are now included in the revised study.

Comment 2: The traffic study should address corner sight distance at Austin/Montemar.

Response 2: Although this is an off-site intersection, which currently exists with a skewed angle, we performed a field review and determined there is no sight distance issue at this intersection. The existing intersection traffic control (stop sign on westbound Austin Drive only) provides adequate sight distance. A brief discussion is included in the revised study.

Comment 3: The project can wait for the results of the TIF.

Response 3: Comment noted.

Comment 4: The project proposes fair share contributions toward Sweetwater Springs including widening to six lanes.

Response 4: A peak hour analysis determined Sweetwater Springs operates acceptably, along with the intersections along its length and therefore the report has revised its mitigation measures to remove this as an impact.

Comment 5: Sweetwater Springs is classified as a major road.

Response 5: See response 4 above (mitigation is no longer required on this segment).

Comment 6: Provide a general discussion on whether construction of SR-54 alleviates the projected poor LOS on Sweetwater Springs.

Response 6: The poor LOS on Sweetwater Springs is a daily traffic deficiency which operates acceptably during peak hours. Until such time SANDAG completes their analysis and projected traffic volumes for the SR-54 corridor study, the Montemar traffic study cannot comment on the benefits of this facility.

[END COMMENTS]

MEMORANDUM

DATE: April 5, 2005
TO: Barry Beech, Project Manager, Department of Public Works
FROM: Darnell & Associates, Inc.
D&A Ref. No: 040906
RE: Montemar Drive Project, Response to Comments

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Response 5: See response 4 above (mitigation is no longer required on this segment).

D3

Comment 6: Provide a general discussion on whether construction of SR-54 alleviates the projected poor LOS on Sweetwater Springs.

Response 6: The poor LOS on Sweetwater Springs is a daily traffic deficiency which operates acceptably during peak hours. Until such time SANDAG completes their analysis and projected traffic volumes for the SR-54 corridor study, the Montemar traffic study cannot comment on the benefits of this facility.

[END COMMENTS]

D4

GARY L. PRYOR
DIRECTOR



County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CALIFORNIA 92123-1666
INFORMATION (858) 694-2960
TOLL FREE (800) 411-0017

SAN MARCOS OFFICE
328 VIA VERA CRUZ - SUITE 201
SAN MARCOS, CA 92069-2620
(760) 471-0730

EL CAJON OFFICE
200 EAST MAIN ST. - SIXTH FLOOR
EL CAJON, CA 92020-3912
(619) 441-4030

May 5, 2005

Duane Betty
Distinctive Homes
707 Broadway, Suite 1150
San Diego, CA 92101

RE: TM 5316; MONTEMAR ESTATES; COUNTY ADOPTION OF
TRANSPORTATION IMPACT FEE ORDINANCE

Dear Mr. Betty;

The Board of Supervisors adopted a Transportation Impact Fee (TIF) ordinance on April 20, 2005 and it will become effective on June 19, 2005. The adoption of this ordinance, as discussed below, will affect the processing of your permit application. The purpose of this letter is to explain to you what the TIF is and inform you of your options regarding this new program. Additional information, including the text of the ordinance, may be accessed at the following website:

<http://www.sdcounty.ca.gov/dpw/permits-forms/manuals.html>

This program requires the payment of an impact fee, usually assessed at the time of issuance of building permits. For residential projects the TIF will be assessed per Equivalent Dwelling Unit. For commercial and industrial projects the fee will be assessed per square foot of building area. The TIF will be used to fund many future circulation element roadway improvements and is an important component of an overall program that can be relied on to mitigate cumulative traffic impacts. Payment of the TIF, in most cases, will be sufficient to mitigate for the cumulative traffic impacts of your project.

TM 5316

2

May 5, 2005

In a letter dated October 29, 2004, the County requested that you prepare a cumulative traffic impact study for your project. Although you have the option of completing your cumulative traffic study that identifies impacts and proposes mitigation, you may instead take advantage of the TIF program as mitigation. The fee will be assessed at the time of issuance of building permits. In your community the current fee is \$3,532 per dwelling unit When a transportation facility, or a portion thereof, as described in the TIF Reports, is constructed by the developer, either as a requirement of a development permit or by written agreement with the County, the County shall grant either construction credits or a cash reimbursement to the developer for eligible construction costs that exceed the total development impact fee required for the subject project. At this time you have a choice. You may choose to rely on the TIF program and pay the fee, or you may want to complete your own cumulative traffic analysis and propose alternative mitigation. Any alternative methodology must be approved by DPW prior to initiating an alternative analysis.

Please contact your DPLU Project Manager when you have made your decision or if you have any questions. Should you decide to take advantage of the TIF, the cumulative section of your traffic study should be replaced with the following language:

The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portion of San Diego County. This program includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected build-out (year 2030) development conditions on the existing circulation element roadway network throughout the unincorporated area of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement projects funded by other public funding sources, such as TransNet, gas tax, and grants. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway buildup over the next 30 years, will use funds from TransNet, state, and federal funding to improve freeways to projected level of service objectives in the RTP.

The proposed project generates ADT. These trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. These project trips therefore contribute to a potential significant

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TM 5316

3

May 5, 2005

cumulative impact and mitigation is required. The potential growth represented by this project was included in the growth projections upon which the TIF program is based. Therefore, payment of the TIF, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to less than significant.

If you have been asked to submit a cumulative level traffic analysis, bring a copy of this letter, along with the additional information/studies that were requested in the Comment Letter dated October 29, 2004, to waive the cumulative traffic analysis submittal requirement.

If you have any questions or need additional information, please contact me at (858) 495-5375 or at stella.caldwell@sdcounty.ca.gov.

Sincerely,

Stella Caldwell
STELLA CALDWELL, Project Manager
Regulatory Planning Division

cc: Larry Walsh, 1870 Cordell Ct., #102, El Cajon, CA 92020
Barry Beach, Project Manager, Department of Public Works, M.S. O336
Greg Krzys, Project Analyst, Department of Planning and Land Use,
M.S. O650
Marette Esperance, Planning Manager, Department of Planning and
Land Use, M.S. O650
Glenn Russell, Environmental Coordinator, Department of Planning and
Land Use, M.S. O650
File

D-7

Darnell & ASSOCIATES, INC.
TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

MEMORANDUM

DATE: May 10, 2005
TO: Stella Caldwell, County of San Diego
FROM: Bill E. Darnell, Darnell & Associates, Inc.
D&A Ref. No: 040906
RE: Tract 5316, Montemar Drive Project, Response to Comments

We are in receipt of County comments dated May 5, 2005 and have revised our February 14, 2005 report to incorporate the County's suggested language to mitigate the project cumulative impacts. The applicant agrees to pay the current fee of \$3,532 per dwelling unit at the time of issuance of building permits.

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